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A Revision of the Genus *Anisops* ° (Notonectidae, Hemiptera)

BY

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ABSTRACT: This paper constitutes a revision of the genus *Anisops* of the family Notonectidae, Hemiptera. Though it is primarily taxonomic, material on the biology of genus is included.

Prior to this work sixty-four species and two subspecies were known. Thirty-one new species are described in this paper. Two color forms are raised to specific level and two species are taken out of synonymy and placed again on specific level. Four species are placed into synonymy.

The subgeneric designations as established by Hutchinson in 1929 are omitted as no evidence was found to support their validity.

The new species are: *A. campbelli* (India), *A. elstoni* (Australia), *A. paracrinita* (Australia), *A. hackeri* (Australia), *A. nodulata* (Philippine Isls.), *A. timorensis* (Timor), *A. coutierci* (Djibouti, Africa), *A. malkini* (Australia), *A. evansi* (Tasmania), *A. sikoroensis* (Madagascar), *A. fijiensis* (Fiji Islands), *A. semita* (Australia), *A. canaliculata* (Australia), *A. tasmaniacensis* (Tasmania), *A. lipovskyi* (India), *A. deanei* (Australia), *A. philippinensis* (Philippine Isls.), *A. barbata* (India, Java), *A. tanalensis* (Madagascar), *A. windi* (Australia), *A. barrenensis* (Australia), *A. paranigrolineata* (India), *A. cavifrons* (India), *A. extendlofrons* (India), *A. graciloides* (South Africa), *A. kempi* (India, Burma, Siam), *A. crinita* (Corfu, India, New Caledonia), *A. majiensis* (Maji-Chumyi, Africa), *A. biroi* (New Guinea), *A. rigoensis* (New Guinea), and *A. waltairensis* (Australia).

Up to and including this paper (exclusive of the synonyms) there have been described ninety-four species and two subspecies.

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INTRODUCTION

This paper is a taxonomic study of the genus *Anisops* (Notonectidae, Hemiptera), designed to alleviate many of the problems which have originated through poor descriptions and inaccurate determinations. It covers ninety-six species, thirty of which are new. In addition to having material from the Francis Huntington Snow Collection, a vast amount of material from other museums was placed at my disposal. The Museums, which made their material available to me, are as follows: British Museum, Paris Museum, Royal Museum of Natural History of Belgium, Basel Natural History Museum of Switzerland, Indian Museum at Calcutta, United

States National Museum, Harvard Museum of Comparative Zoology, and the Chicago Natural History Museum. In addition, I have studied material from the collections of Lutz, Usinger, California Academy of Science, and the Department of Agriculture, Sydney, New South Wales, Australia. To each of these I wish to express my gratitude for without their cooperation, this study would have been impossible.

REVIEW OF THE LITERATURE

In 1840, Spinola (38) established the genus *Anisops*. Franz X. Fieber (11) in 1851, redescribed the genus and all known species belonging thereto. During the next half-century many species were described; some were valid, others not, for unfortunately it was the practice of the taxonomists of that time to describe and determine species largely on the basis of color. This resulted in much confusion not only in regard to the accuracy of determination but also in ascertaining the possible geographical distribution of a species.

In 1904, Kirkaldy (30) published his "Über Notonectiden." In this paper three important changes were made. First, he examined types when possible and indicated synonymous species. Second, he introduced the use of structural characteristics in species determination. Third, he divided the genus into two genera. The generic name *Buenoa* was proposed for those species inhabiting the Western Hemisphere; the name *Anisops* was retained for the species of the Eastern Hemisphere. However, this separation was not made on geographical distribution alone, but on the fact that the males of the species of the Western Hemisphere all have two-segmented front tarsi (the third is present, but so small as not to be readily discernible) while the males of the species of the Eastern Hemisphere have one-segmented front tarsi.

In 1923, H. M. Hale (14) published "Some Aquatic Hemiptera from Western Australia" which included descriptions of the species of that area along with a key. In 1929, G. E. Hutchinson (23) published "A Revision of the Notonectidae and Corixidae of South Africa." In this publication keys and descriptions for species of that area were provided. Lundblad (32) in 1933 published "Zur Kenntnis der Aquatilen und Semi-Aquatilen Hemipteren von Sumatra, Java, and Bali," in which many of the species of that area were described adequately for the first time. Though each of these above mentioned papers is extremely valuable, together they accounted for only about half of the species known in 1933.

Through the years two problems have consistently plagued the workers in this genus. First, most of the older descriptions were based on color and it is almost impossible to determine species on this basis. Second, the finding of suitable characters to separate the species has been particularly difficult. As has been pointed out by previous workers, notably Lundblad (32) and Hutchinson (23), only the males can be relied on for accurate determination. Unfortunately, the male genital capsule is not of specific value in this genus and other characters for separation of the species must be found.

Jaczewski (28) noted that the shape of the eyes together with that of the vertex appeared to be of specific importance as well as the shape and size of the rostral prong. Poisson in many of his descriptions has made extensive use of the chaetotaxy of the male front legs and Hutchinson (23) has indicated the specific value of the facial tubercle. Lundblad (32) made use of all these characters in his specific descriptions.

After examining many species, I find the above characters together with the shape of the labrum and front femur of the males afford a ready means of species determination.

This paper represents the first generic revision since Kirkaldy's paper of 1904. I have tried to account for every named species, but in some cases the descriptions were based on females and it is impossible to assign a species to such a description, as females of different species are often almost identical; in other instances the material available yielded no specimens which matched the descriptions.

I was extremely fortunate in having at my disposal many specimens, which were compared with types by D. H. B. Hungerford in 1928. This has been extremely valuable, especially in cases of unavailable types and poor descriptions.

THE FAMILY NOTONECTIDAE

The family Notonectidae includes those truly aquatic forms which differ from all others, except Pleidae and Helotrephidae, in the constant habit of swimming on their backs. The members of this family are deep-bodied, flat ventrally, and convex dorsally. The eyes are large reniform, and twice sinuate, occupying most of the dorsal surface of the head. Ocelli are absent. The antennae arise on the latero-ventral surface of the head, immediately posterior to the eyes; each antenna consisting of three or four segments. Beak four-segmented. Front and middle pairs of legs adapted for grasp-

ing, hind legs for swimming. Tarsi (except the one-segmented fore tarsi of the male *Anisops*) three-segmented counting a small basal segment which is inconspicuous. Tarsi possessing two apical claws which may be greatly reduced on the hind pair of legs. Ventral abdominal segments with median longitudinal keel, which has hairs, at least on its lateral margin. Sides of the venter with hairs directed medianly.

This family consists of eight genera which may be separated by the following key as advanced by Hungerford (22).^{*}

KEY TO GENERA OF THE NOTONECTIDAE

- A. Hemelytral commissure without definite hair-lined pit at anterior end
(Subfamily Notonectinae)
- B. Intermediate femur with anteapical pointed protuberance and antennae 4-segmented(Tribe Notonectini)
- C. Anterolateral margins of prothorax not foveate.....*Notonecta*
- CC. Anterolateral margins of the prothorax foveate.....*Enithares*
- BB. Intermediate femur without anteapical pointed protuberance. Antennae 3- or 4-segmented.....(Tribe Nychini)
- C. Intermediate tarsus with two well-developed segments and a very small basal one. Sides of prothorax not foveate. Infra-coxal plates bare, but margined with hair.....*Neonychia*
- CC. Intermediate tarsus with one well-developed segment. Infra-coxal plates covered with hair.
- D. Antennae three segmented.....*Nychia*
- DD. Antennae four segmented.....*Martarega*
- AA. Hemelytral commissure with definite hair-lined pit at anterior end
(Subfamily Anisopininae)
- B. Ventral abdominal keel not extending onto last abdominal segment. Male genital capsule cleft behind. Males without stridular protuberance on front tibia. Females with short gonapophyses.....*Paranisops*
- BB. Ventral abdominal segment extending onto last abdominal segment.
- C. Male with anterior tarsus 2-segmented.....*Buenoa*
- CC. Male with anterior tarsus 1-segmented.....*Anisops*

THE GENUS ANISOPS

The genus *Anisops* is readily distinguishable from all other genera in the family by the following three combination of characters: the presence of a pit at the anterior end of the hemelytral commissure, the extension of the ventral abdominal keel onto the last abdominal segment, and the one-segmented front tarsi of the males.

The members of this genus are slender insects and usually small, though some species attain a length of about 12 mm. The eyes are large and not holoptic (except *A. breddeni* Kirkaldy and *A. kempii* n. sp.). The anterior half of the dorsal interocular space has a median longitudinal depression between two slightly swollen areas. The back is convex longitudinally with the thorax being deeper than the other parts of the body. The hemelytra are not coriaceous

^{*} Later modified to include the genus *Paranychia*. Still later changed to *Neonychia* (see Journ. Kansas Ent. Soc., vol. XXIII, p. 73, 1950).

as in *Notonecta* and *Enithares* and there is little difference in the texture of the membrane and the remainder of the wing though the two areas are definitely delimited. The underside of the abdomen has a median longitudinal keel whose lateral margins bear long hairs. On either side of the abdomen next to the connexivum is a longitudinal trough. The inner margins of the connexivum bear long hairs which together with those of the keel serve to trap air in the trough. All the tarsi are two-segmented with the exception of the male front tarsi which are one-segmented.

Only the males possess a stridulatory apparatus, which consists of a tibial comb and a rostral prong (to be described in detail later). The claspers of the genital capsule are asymmetrical and of uniform shape for the genus, the right one being broad, while the left is deeply excavate on the posterior margin and hook-shaped at the apex. (Plate XXXVI figs. 3, 4.)

An interesting feature of the internal anatomy of both males and females is the presence of two ventral rows of cells containing hemoglobin (35). Each row is divided into distinct groups corresponding in number to the abdominal spiracles and attached to the latter by the tracheal trunk. These cells are tracheal cells, around and in which the tracheoles ramify. A similar group of cells have been observed by Bare (2) in the genus *Buenoa*.

SYSTEMATICS OF THE GENUS ANISOPS

Hutchinson in 1929 divided the genus into three subgenera, namely *Microanisops*, *Anisopoides*, and *Anisops*. The first two are monotypic.

The subgenus *Microanisops* was erected on the following characters: brachypterous wings and elytra, a short posterior tarsus with the tibia being one and three-fourths the length of the latter, and the presence of a subapical black spot on the hemelytra. The subgeneric type is *Anisops (M.) apicalis* Stål. In a study of a male and female of this species determined by myself, I do not find the hemelytra to be brachypterous, but extending the full length of the body; however the wings are reduced and appear non-functional. Moreover, the posterior tibia is not one and three-fourths the length of the posterior tarsi but only one and two-sevenths, a relationship also found by Jaczewski (23). *Anisops (M.) apicalis* is not unique in having the subapical black spot as I have observed similar spots on specimens of *A. (A.) ares* Hutchinson. The single good character for such a group would be the brachypterous wings. However, *Anisops (Anisops) hungerfordi* Poisson which occurs in central

Africa along with *Anisops (M.) apicalis*, is so closely related to this species that they may be forms of the same species. They differ primarily in the character of the scutellum which is greatly reduced in size in *Anisops (M.) apicalis*, a condition which is to be expected in brachypterous forms. Also, the wings of the *Anisops (A.) hungerfordi* are not brachypterous. A closer investigation of the biology of the two species would be necessary before determining whether or not they are forms of the same species.

The type of the subgenus *Anisopoides* is *Anisops (Anisopoides) agalia* Hutchinson and the subgenus is based on the lack of rostral prongs. The presence of the stridulatory comb on the tibia suggests that this species arose from forms having rostral prongs and which have been lost through specialization.

In my study of the genus, I have found no forms to add to either of the subgenera of Hutchinson. Both subgenera appear to be only individual specializations and not worthy of subgeneric designation. Therefore, I have chosen not to use the subgeneric groups as established by Hutchinson as I do not believe such to be valid.

The term "form" has been used by previous workers to describe specimens having a different color pattern from that of the type of the species. Only in two cases, *A. sardea* f. *madagascarensis* Poisson and *A. pellucens* f. *grandis* Poisson are such differences supported by morphological differences. In both of these cases I have raised the so-called "forms" to species level. Otherwise, I have disregarded the "form" as a subspecific designation.

PHYLOGENY

The species of *Anisops* exhibit many specializations. Most of them do not indicate phyletic tendencies as they occur, oftentimes, in completely unrelated forms.

The only specialization that appears to indicate a phyletic line is an increase in the size of the eyes. On the basis of this character, the species of the genus fall in one of two groups. In one the enlargement of the eyes is accompanied by a subsequent narrowing of the interocular space from the synthlipsis forward. The peak of this series is reached in *A. breddeni* Kirkaldy and in *A. kempfi* n. sp., both of which have holoptic eyes. This group embraces the majority of the species. Within this group there is a small discrete unit of eight species, so closely allied to one another and representing such a unique line of specialization as to be worthy of note. This small group is characterized by males possessing an excavate frons and peculiarly curved middle tarsal claws in which

the claws are turned strongly inward at the base with the posterior claw thicker than the anterior one.

The second major group on the basis of the enlargement of the eyes is somewhat smaller than the foregoing and is one in which the enlargement of the eyes proceeds laterally. This is accompanied by the narrowing of the anterior width of the vertex until the dorsal interocular space becomes almost parallel-sided with the synthlipsis remaining broad. The peak of this series is reached in *A. evansi* n. sp. and *A. tasmaniaensis* n. sp. in which the head is at least as wide as the pronotal humeral width and the synthlipsis is three-fourths the anterior width of the vertex.

Some of the specializations, which appear in completely unrelated forms are: the dorso-ventral enlargement of the male front femur; the projecting of the interocular space into an anterior cephalic horn; the facial tubercle becoming depressed, grooved, excavate or laterally compressed, and the elongation of the pronotum.

BIOLOGY AND DEVELOPMENT

Hale (13, 14) and Poisson (35) have both studied the biology and development of *Anisops*, using *Anisops thienemanni* Lundblad (= *Anisops hyperion* Hale, nec. Kirkaldy) and *Anisops sardea* Herich-Schaffer respectively.

The members of this genus of backswimmers live in freshwater pools, lakes, and ponds; however at least one species, *A. sardea* is adapted to marine life as well. As with the other members of the family they swim on their backs and are predaceous, feeding on small crustaceans and mosquito larvae, which they hold securely beneath the bristles arming the margins of the fore and middle legs.

In order to replenish an air supply the insects ascends to the surface of the water where the venter is opened by the spreading apart of the guard hairs of the connexivum and keel. By the sudden closing of the guard hairs air is gathered in the longitudinal air troughs, after which the insect quickly darts down a few inches into the body of the water where it maintains almost perfect balance. Tendencies to rise or sink are offset by strokes of the swimming legs. Poisson points out that when fatigued the insect will sink to the bottom of the water and there remain on its back for a short period.

Preceding copulation there is an elaborate courtship during which, as recorded by Hale ". . . the male stridulating the while, poises below and a little behind the female, and in this position accompanies her every movement; finally with the extended posterior

legs quivering with excitement, he attempts to clasp her from below."

This stridulatory apparatus consists of a stridulatory comb borne on an expanded basal portion of the inner surface of each anterior tibia and a pair of chitinous prongs, one on each side of the third rostral segment. The stridulation is accomplished by rubbing the comb over the rostral prong.

The eggs are laid singly in stems of aquatic plants and to effect oviposition the female gouges a hole in the stem of the selected plant and inserts the egg leaving a small portion of the anterior surface exposed at the mouth of the cavity. The egg is oval and elongate and Poisson notes that the eggs of *A. sardea* bore two small appendages at the anterior end which he regarded as rudimentary pneumatic appendages.

The eggs hatch in about three weeks. There are five nymphal instars, the first four occupying each a little more than a week, with the fifth a little longer. Adulthood is reached in about two months. Hale points out that there are at least two generations a year.

The newly hatched nymphs are helpless until the air troughs are filled with air. During this period movement is awkward. A period of three days may elapse before the surface film is attained and the air troughs filled. Possibly during this period respiration is effected through the skin.

Anisops has almost perfect balance in the water and rarely clings to the plant stems as in the case of *Notonecta* and *Enithares*. This ability is likewise encountered in *Buenoa* which is quite similar to this genus in many respects.

DISTRIBUTION

The geographical range of *Anisops* extends throughout Africa, Madagascar and neighboring islands, the Mediterranean area, extending eastward to the islands of the South Pacific, thence northward into China and Japan, with *A. sardea* carrying its range along the entire eastern coast of Asia and, while this record is somewhat questionable, Fieber (11, 12) records it from Unalaska in the Western Hemisphere.

Although many species have been recorded from Asia as well as Africa, I have been able to find only two species whose distribution is so widespread, *Anisops sardea* which occurs throughout most of the generic range and *Anisops crinita* n. sp. which occurs in India as well as on the Mediterranean island of Corfu.

TECHNIQUES AND TERMINOLOGY

In order to interpret correctly the species descriptions, and to use them successfully, the reader should be acquainted with the technique and terminology employed herein.

The measurements of the head, pronotum and their respective parts were taken with the insect in a perfectly horizontal position. To view and measure the rostral prong, the specimen should be placed in a lateral position and the length of the prong measured from the base of the third rostral segment to the apex of the prong, along the posterior margin of the latter. To secure accurate measurement of the prong, the bug should be tilted until the prong is horizontal. The length of the third rostral segment is measured along its posterior margin.

To observe accurately and closely the chaetotaxy of the male front leg, the leg should be removed. This is best accomplished by placing the tip of a pin at the base of the coxa on its inner surface and applying a little outward pressure. The break is cleaner and accomplished with much less pressure if the specimen is dry and has not been relaxed. The leg should then be placed in a caustic potash solution until clear enough to observe. This clearing can be accomplished in a few minutes if the solution is hot, though not boiling. If placed in a cold solution, one day will be sufficient for clearing. It will be noted that my plates do not show the thick covering of hairs along the anterior half of the inner surface of the leg. These were purposely omitted so that the characteristic setae would not be obscured. The relative lengths of the parts of the legs are measured along the longest part of each segment.

Different workers in describing members of this genus have used different terms for the same structure. In the preparation of this manuscript, the most descriptive terms have been employed. Below is a short list of words and phrases with which the reader should be acquainted to fully understand the descriptions.

1. *Anterior width of the vertex*—the width of the interocular space lying between the anterior margins of the eyes as seen from above.
2. *Facial tubercle*—that portion of the frons immediately above the labrum.
3. *Frons*—the lower portion of the interocular space from the labrum to the anterior margin of the head.
4. *Interocular space*—that portion of the head between the eyes.
5. *Rostral prong*—the pair of projections borne on the third rostral segment, one on each side.
6. *Synthlipsis*—the narrowest dorsal portion of the interocular space immediately anterior to the pronotum.
7. *Stridulatory ridge*—the expanded portion of the inner basal surface of the anterior tibiae of the males bearing the stridulatory comb.

TAXONOMY OF THE GENUS ANISOPS

GENUS ANISOPS Spinola

(Type *A. sardea* Herrich-Shaffer)

1840. *Anisops* Spinola, Essais sur les Insectes Hemipteres, Rhyngotes ou Heteropteren, p. 58.
 1851. *Anisops*, Fieber, Abhandl. Königl. Bohmischen Ges. der Wiss., vol. V, pt. 7, pp. 481-482.
 1865. *Anisops*, Stål, Hemiptera Africana, vol. III, p. 191.
 1904. *Anisops*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, p. 111.
 1926. *Anisops*, Jaczewski, Ann. Zool. Mus. Polonici Hist. Nat., vol. II, p. 81.
 1929. *Anisops*, Hutchinson, Ann. South African Mus., vol. XXV, pt. 3, pp. 376-382.

Of the ninety-four species herein described, sixteen species, namely *Anisops ali* Distant, *Anisops alluaudi* Poisson, *Anisops aphrodite* Kirkaldy, *Anisops calcaratus* Hale, *Anisops canariensis* Noualhier, *Anisops ciliata* Stål, *Anisops endymion* Kirkaldy, *Anisops hyaline* Fieber, *Anisops lanceolata* Poisson, *Anisops letitia* Hutchinson, *Anisops mauricensis* Poisson, *Anisops meulenaerei* Poisson, *Anisops milloti* Poisson, *Anisops ocularis* Hale, *Anisops pugnax* Poisson, and *Anisops worthingtoni* Jaczewski, were not present in the material studied. In such cases I have presented the original descriptions and, when possible, I have included copies of the drawings on my plates. However, they were omitted from the key. The following is a key to the males of *Anisops*.

KEY TO MALES OF ANISOPS

- | | | |
|----|--|----|
| 1. | Synthlipsis wide, one third or more the anterior width of the vertex..... | 2 |
| | Synthlipsis narrow, less than one third the anterior width of the vertex..... | 69 |
| 2. | (1) Third rostral segment with prongs..... | 3 |
| | Third rostral segment without prongs..... <i>A. agalia</i> Hutchinson | |
| 3. | (2) Along the median longitudinal axis, the head is one half or more as long as the pronotum | 4 |
| | Along the median longitudinal axis, the head is less than one half of the length of the pronotum..... | 57 |
| 4. | (3) Greatest width of the head less than seven times the anterior width of the vertex | 5 |
| | Greatest width of the head more than seven times the anterior width of the vertex | 42 |
| 5. | (4) Facial tubercle either longitudinally grooved, or excavate, or laterally compressed forming a median carina..... | 32 |
| | Facial tubercle neither longitudinally grooved, nor excavate, nor laterally compressed forming a median carina..... | 6 |
| 6. | (5) Interocular space projected anteriorly into a short cephalic horn..... | 7 |
| | Interocular space not projected anteriorly into a short cephalic horn..... | 8 |
| 7. | (6) Base of middle tibia with an inward projection which bears on its inner surface an oval patch of short, stout, closely set setae..... <i>A. stali</i> Kirkaldy | |
| | Base of middle tibia not so formed..... <i>A. campbelli</i> n. sp. | |
| 8. | (6) Over 6.5 mm. in length..... | 24 |
| | Less than 6.5 mm. in length..... | 9 |

9. (8) Synthlipsis one half or more the anterior width of the vertex..... 20
 Synthlipsis less than one half the anterior width of the vertex..... 10
16. (9) Apex of front femur rounded or truncate..... 17
 Apex of front femur acuminate..... 11
11. (10) Inner surface of front tarsus without median small setae...*A. amaryllis* Hutchinson
 Inner surface of front tarsus with one or more median small setae..... 12
12. (11) Inner surface of front tarsus with one basal median setae.....*A. elstoni* n. sp.
 Inner surface of front tarsus with a median row of small setae..... 13
13. (12) Inner surface of front tarsus with a median row of three small setae in basal third 14
 Inner surface of front tarsus with a median row of more than three small setae extending beyond the basal third..... 15
14. (13) Apex of rostral prong more or less rounded; stridulatory comb with longest teeth subapical*A. eros* Hutchinson
 Apex of rostral prong acuminate; stridulatory comb with longest teeth at apex.....*A. kampalensis* Hutchinson
15. (13) Facial tubercle with a large patch of long erect hairs.....*A. paracrinata* n. sp.
 Facial tubercle without a patch of hairs..... 16
16. (15) Labrum with basal width twice its median length.....*A. hackeri* n. sp.
 Labrum with basal width less than twice its median length, *A. hyperion* Kirkaldy
17. (10) Anterior margin of pronotum bearing a large prominent tubercle behind the synthlipsis*A. tuberculata* Poisson
 Anterior margin not bearing a large tubercle..... 18
15. (17) Third rostral segment bearing two nodules on its anterior median line
A. nodulata n. sp.
 Third rostral segment not bearing nodules on anterior line..... 19
19. (18) Posterior margin of pronotum straight, not medianly emarginate...*A. apicalis* Stål
 Posterior margin of pronotum medianly emarginate
A. canariensis perplexa Poisson
20. (9) Apex of front femur truncate or rounded..... 22
 Apex of front femur acuminate..... 21
21. (20) Facial tubercle bearing a short erect spur.....*A. edepol* Kirkaldy
 Facial tubercle not bearing a short erect spur.....*A. elstoni* n. sp.
22. (20) Second rostral segment with a flap-like extension along basal half of posterior surface*A. timorensis* n. sp.
 Second rostral segment not so formed..... 23
23. (22) Viewed laterally the anterior margin of the third rostral segment overlaps at its apex the base of the fourth.....*A. occipitalis* Breddin
 Viewed laterally the third rostral segment does not overlap the base of the fourth.....*A. coutierei* n. sp.
21. (8) Large, robust species over 9.0 mm. in length.....*A. pellucens* Gerstaecker
 Less than 9.0 mm. in length..... 25
25. (24) Apex of front femur acuminate..... 26
 Apex of front femur rounded or truncate..... 30
23. (25) Anterior margin of fore tibia with a row of eleven prominent setae extending from basal third to apex.....*A. malkini* n. sp.
 Anterior margin of fore tibia without such a row of setae..... 27
27. (26) Greatest width of head equal to the pronotal humeral width.....*A. evansi* n. sp.
 Greatest width less than the pronotal width..... 28
28. (27) Inner surface of fore tarsi with only a median large, stout setae at base
A. gratus Hale
 Inner surface of fore tarsi with a median longitudinal row of small setae.... 29

29. (28) Greatest width of head five times the anterior width of the vertex
A. hyperion Kirkaldy
 Greatest width of head less than five times the anterior width of the vertex *A. gobana* Poisson
30. (25) Dorsal margin of anterior femur with a slight concavity at apical third. 31
 Dorsal margin of anterior femur without a slight concavity. *A. varia* Fieber
31. (30) Greatest width of head equal to the pronotal humeral width; pronotal lateral margins convex and converging. *A. robusta* Hutchinson
 Greatest width of head less than the pronotal humeral width; pronotal lateral margins almost straight and diverging. *A. occipitalis* Breddin
32. (5) Large species, 9.0 mm. or more in length; frons with a median longitudinal row of erect hairs. *A. sikorensis* n. sp.
 Less than 9.0 mm. in length; frons without a median row of hairs. 33
33. (32) Facial tubercle laterally compressed forming a median carina. 34
 Facial tubercle not laterally compressed forming a median carina. 36
34. (33) Rostral prong longer than third rostral segment. *A. fijiensis* n. sp.
 Rostral prong shorter than third rostral segment. 35
35. (34) Fore tarsus two thirds the length of the fore tibia. *A. adonis* Hutchinson
 Fore tarsus less than two thirds the length of the fore tibia
A. jaczewski Hutchinson
36. (33) Inner surface of anterior tibia with two pairs of short stout setae at its anterior margin midway between the base and apex. 37
 Inner surface of anterior tibia without such setae. 38
37. (36) Base of middle tibia with an inward projection which bears on its inner surface an oval patch of short, stout, closely-set setae. *A. stali* Kirkaldy
 Base of middle tibia not so formed. *A. campbelli* n. sp.
35. (36) Facial tubercle with a median longitudinal groove. 39
 Facial tubercle not so. 40
39. (38) Ridges bordering longitudinal groove provided with long erect hairs
A. senita n. sp.
 Ridges bordering longitudinal groove not provided with long erect hairs
A. canaliculata n. sp.
40. (38) Middle tarsal claws strongly curved inward at base; posterior claw thicker than anterior one. 41
 Middle tarsal claws not strongly curved inward at base; posterior and anterior claws the same width. *A. psyche* Hutchinson
41. (40) Frontal excavation bordered by two ridges on each side. *A. genji* Hutchinson
 Frontal excavation bordered by only one ridge. *A. nivea* (Fabricius)
42. (4) Greatest width of head equal to or more than pronotal humeral width. 54
 Greatest width of head less than pronotal humeral width. 43
43. (42) Facial tubercle laterally compressed forming a median carina. 44
 Facial tubercle not laterally compressed. 46
44. (43) Apex of front femur truncate or rounded. 45
 Apex of front femur acuminate. *A. fijiensis* n. sp.
45. (44) Vertex not extending beyond the anterior margins of the eyes
A. tahitiensis Lundblad
 Vertex extending slightly beyond the anterior margins of the eyes
A. lipovskyi n. sp.
46. (43) Synthlipsis less than one half the anterior width of the vertex. 47
 Synthlipsis one half or more the anterior width of the vertex. 50
47. (46) Inner surface of fore tarsi provided with a median row of five small setae extending from base to apex. *A. deanei* n. sp.
 Inner surface of fore tarsi not provided with a median row of setae extending from base to apex. 48

48. (47) Rostral prong shorter than third rostral segment.....*A. philippinensis* n. sp.
 Rostral prong longer than third rostral segment..... 49
49. (48) Inner surface of fore tarsi without a row of small setae.....*A. eleopatra* Distant
 Inner surface of basal fourth of fore tarsi with a short row of four setae
A. praetexta Hutchinson
50. (46) Large species; over 8.0 in length..... 51
 Less than 8.0 in length..... 52
51. (50) Facial tubercle with two median tufts of hairs.....*A. barbata* n. sp.
 Facial tubercle without two tufts of hairs.....*A. grandis* Poisson
52. (50) Apex of front femur rounded or truncate.....*A. tanalensis* n. sp.
 Apex of front femur not acuminate..... 53
53. (52) Rostral prong slightly shorter than third rostral segment...*A. philippinensis* n. sp.
 Rostral prong at least as long as the third rostral segment.....*A. windi* n. sp.
54. (42) Apex of front femur rounded.....*A. leucotheca* Esaki
 Apex of front femur acuminate..... 55
55. (54) Pronotal lateral margins parallel.....*A. doris* Kirkaldy
 Pronotal lateral margins diverging..... 56
56. (55) Greatest width of head seven to eight times the anterior width of the
 vertex; over 7.0 mm. in length.....*A. tasmaniaensis* n. sp.
 Greatest width of head ten times the anterior width of the vertex; less
 than 6.0 mm. in length.....*A. philippinensis* n. sp.
57. (3) Facial tubercle swollen into a triangular eminence; apex acuminate
A. wakefieldi White
 Facial tubercle not so formed..... 58
58. (57) Facial tubercle excavate or longitudinally grooved..... 59
 Facial tubercle not as above..... 60
59. (58) Facial tubercle deeply excavate.....*A. hancocki* Hutchinson
 Facial tubercle longitudinally grooved.....*A. canaliculata* n. sp.
60. (58) Pronotal lateral margins almost parallel..... 68
 Pronotal lateral margins diverging..... 61
61. (60) Median length of pronotum three fourths the humeral width..... 67
 Median length of pronotum less than three fourths the median length..... 62
62. (61) Front femur with apex curved..... 64
 Front femur with apex acuminate. 63
63. (62) Pronotum with a deep median longitudinal depression; greatest width of
 head eight tenths pronotal humeral width.....*A. gratus* Hale
 Pronotum without median longitudinal depression; greatest width of head
 nine tenths pronotal humeral width.....*A. decipiens* Hutchinson
64. (62) Less than 6.0 mm. in length..... 65
 6.0 mm. or more in length..... 66
65. (64) Front femur greatly enlarged dorso-ventrally; dorsal margin strongly con-
 vex*A. barrenensis* n. sp.
 Front femur not greatly enlarged; dorsal margin not strongly convex
A. hungerfordi Poisson
66. (64) Dorsal and ventral margins almost parallel for the basal three fourths of
 their length*A. ares* Hutchinson
 Dorsal and ventral margins converging from the base.....*A. varia* Fieber
67. (61) Viewed laterally, the interocular space not swollen beyond the margins of
 the eyes.....*A. paramigrolineata* n. sp.
 Viewed laterally, the interocular space is swollen beyond the margins of
 the eyes.....*A. nigrolineata* Lundblad

88. (86) Over 6.5 mm. in length.....*A. gratus* Hale
 Less than 6.5 mm. in length..... 89
89. (88) Rostral prong shorter than third rostral segment; apex rounded
A. exigera Horvath
 Rostral prong longer than third rostral segment; apex acuminate..... 90
90. (89) Facial tubercle flat.....*A. vitrea* Signoret
 Facial tubercle slightly raised, not flat.....*A. hypatia* Hutchinson
91. (83) Facial tubercle slightly raised and flattened on ventral surface..... 92
 Facial tubercle not flattened on ventral surface..... 93
92. (91) Small species, less than 5.5 mm. in length.....*A. vitrea* Signoret
 Over 6.0 mm. in length.....*A. balcis* Hutchinson
93. (91) Anterior tarsus without a median row of small setae on inner surface..... 94
 Anterior tarsus with a median row of small setae on inner surface..... 95
94. (93) Dorsal margin of third rostral prong appears to arise near the apex of
 third rostral segment.....*A. biroi* n. sp.
 Dorsal margin of third rostral prong appears to arise in basal half of third
 rostral segment.....*A. rigoensis* n. sp.
95. (93) Anterior tarsus with a median row of five small setae on inner surface
A. deanei n. sp.
 Anterior tarsus with a median row of three small setae on inner surface
A. waltirensis n. sp.

Anisops agalia Hutchinson

(Pl. XXXVI, fig. 7)

1929. *Anisops agalia* Hutchinson, Ann. South African Mus., vol. XXV, pt. 3, pp. 404-406, Pl. XXIX, fig. 4, Pl. XXXII, fig. 7, 7a.

1933. *Anisops agalia*, Hutchinson, Internat. Rev. ges. Hydrob. und Hydrog., vol. 28, pt. 5/6, pp. 446, 459, 460 (ecological notes).

Size.—Males, length 5.9 mm., greatest body width 1.5 mm.; females, length 6.6 mm., greatest body width 2.1 mm.

Shape.—Fusiform species; greatest body width about two fifths the body length.

Color.—General facies stramineous. Eyes brown. Legs stramineous. Abdominal venter dark brown.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width of the head slightly less than the humeral width of the pronotum and almost four times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is two thirds the length of the pronotum. Pronotum with its humeral width almost twice its median length; lateral margins diverging and almost one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum short with its basal width one and one half the median length; apex truncate, almost one-third the basal width. Third rostral segment lacking rostral prongs. Stridulatory comb (Pl. XXXVI, fig. 7b)

of approximately six, even-length teeth. Anterior tibia with its inner surface covered with procumbent spatulate setae. Chaetotaxy of the front leg as shown on Plate XXXVI. The relative lengths of the parts of the legs are as follows:*

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	128	86	..

Female structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width of the head approximately eight tenths the pronotal humeral width and four times the anterior width of the vertex; synthlipsis wide, more than one third the anterior width of the vertex; along the median longitudinal axis the head is almost one-half the length of the pronotum. Pronotum with its humeral width twice its median length; lateral margin diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	119	56	31
Middle leg	100	78	36	22
Hind leg	100	79	43	46

Location of types.—Type, allotype, and paratypes from Cape, Transvaal in the South African Museum.

Comparative notes.—By its lack of rostral prongs, *A. agalia* Hutchinson is different from all other known species of *Anisops*. However, it appears similar to *A. hypatia* from which it can be readily separated by the fact that the males of *A. hypatia* lack the spatulate front tibial hairs as found on the males of *A. agalia* as well as by the presence of rostral prongs.

Data on distribution:

SOUTH AFRICA

Vlei Roxana, 1-21-1927, C. F. Mobray, one male, one female, gift to H. B. H. from G. E. Hutchinson. (F. H. Snow Coll.)

Anisops stali Kirkaldy

(Pl. XXXVII, fig. 9; Pl. LVII, fig. 107)

1855. *Notonecta australis* Stål, Öfversigt af Kongl. Vet. Akad. For., vol. VII, p. 89. (nec Oliver).

1859. *Notonecta australis*, Stål, Eugenes Resa, p. 267.

1904. *Anisops stali*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 113, 132.

1923. *Anisops stali*, Hale, Rec. South Australian Mus., vol. II, no. 3, pp. 414-415, fig. 368.

1925. *Anisops stali*, Hale, Archiv för Zoologi utgivet av. K. Svenska Vetenskapsakademien, vol. 17, no. 20, p. 17 (ecological note).

* The single male specimen at my disposal was minus the two hind pairs of legs.

1933. *Anisops stali*, Lundblad, Arch. für Hydrob., Suppl., vol. XII, p. 146 (list of Indo-australian species of this genus).

1934. *Anisops stali*, Hungerford, Bull. Brooklyn Ent. Soc., vol. XXIX, p. 69 (ecological note).

Size.—Males, length 9.0 mm.-10.6 mm., greatest body width 2.5 mm.-2.8 mm.; females, length 8.5 mm.-10.2 mm., greatest body width, 2.4 mm.-2.9 mm.

Shape.—Large fusiform species; greatest body width about four tenths body length.

Color.—*Brown form*: General facies stramineous. Eyes brown. Pronotum may be orange or tinged with orange. Hemelytra may be hyaline and appear darker due to underlying dark dorsal body surface. *Gray form*: General facies gray; eyes brown or gray. Hemelytra hyaline and appear gray due to the black dorsal body surface. Legs of both forms stramineous. Abdominal venter dark brown or black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the vertex extending beyond the anterior margins of the eyes; greatest width of the head eight to nine tenths the pronotal humeral width and three to four times the anterior width of the vertex; synthlipsis wide, two thirds the anterior width of the vertex; along the median longitudinal axis the head is one half as long as the pronotum. Pronotum with its humeral width twice its median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. Frons concavely depressed with apex extending slightly beyond the anterior margins of the eyes to form a short cephalic horn; facial tubercle with a horseshoe-shaped protruding area immediately anterior to the labrum, surrounded by a deep depression. Labrum long, with its median length one and three fourths its basal width; apex more or less acuminate. Rostral prong (Pl. LVII fig. 107) shorter than the third rostral segment; apex more or less acuminate. Anterior margin of the third rostral segment with long procumbent hairs on each side, extending to the apex. Stridulatory comb (Pl. XXXVII fig. 9b) with a highly variable number of teeth, varying from fifteen to twenty-five. Chaetotaxy of male front leg as shown on Plate XXXVII. Base of the middle tibia with a short inward projection which bears on its inner surface a circular group of thickly-set, stout, even-length setae;

basal third of middle tibia with a strong concavity on anterior margin. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	65	?
Middle leg	100	84	34	23
Hind leg	100	83	33	30

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head eight to nine tenths the pronotal humeral width and three to four times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is almost one half the length of the pronotum. Pronotum with its humeral width almost twice its median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	48	29
Middle leg	100	83	36	22
Hind leg	100	77	35	30

Location of types.—Type material from Australia, in the Stockholm and Paris Museums.

Comparative notes.—This species along with *Anisops pellucens* Gerstaecker are two of the largest species within this genus. However, they are not readily confused with one another as the males of *A. pellucens* lack the short cephalic horn, and the circular group of basal setae on the middle tibiae as found on the males of *A. stali*.

Data on distribution:

AUSTRALIA

New South Wales, one male (F. H. Snow Coll.)

Broken Hill, X-4-44, C. E. Chadwick, two males (Dept. of Agric., N. S. W., Austral.)

New South Wales, Coolebah, 1904, one male, one female (Dept. of Agric., N. S. W., Austral.)

New South Wales, Hay, Lea, one male (Dept. of Agric., N. S. W., Austral.)

New South Wales, Brewarrina, June, 1944, W. W. Froggatt, one female (Dept. of Agric., N. S. W., Austral.)

West Australia, Wiluna, Oct. 19, 1931, Harv. Austral. Exped., P. J. Darlington, seven males, four females (Harv. Mus. Comp. Zool.)

Queensland, Brisbane, Dec. 1922, H. Hacker, one female (F. H. Snow Coll.)

Queensland, Duarlinga, two males, two females (F. H. Snow Coll.)

Cordilla Downs, one male, one female (F. H. Snow Coll.)
 Cordilla Downs, VII-16-'88, F. Archer, one female (F. H. Snow Coll.)
 Townsville, Jan. 1945, B. Malkin, one female (U. S. Nat. Mus.)
 Australia, II-'47, Verreaux, one female (F. H. Snow Coll.)

TIMOR

Soe, 1935, Buhler, five males, five females (F. H. Snow Coll.); twelve males, fourteen females (Basel Nat. Hist. Mus., Switzerland).

Soe, June, 1935, C. Buhler and Meyer, three males, one female (Basel Nat. Hist. Mus., Switzerland).

CELEBES

Lahendong, six females (Basel Nat. Hist. Mus., Switzerland).

OKINAWA

Okinawa, Sept. 30, 1945, W. D. Fields, four males, one female (U. S. Nat. Mus.).

PHILIPPINE ISLANDS

Mindanao, Baker, one female (U. S. Nat. Mus.).

Anisops campbelli n. sp.

(Pl. XXXVII, fig. 8)

Size.—Males, length 7.3 mm.-8.1 mm., greatest body width 2.1 mm.-2.2 mm.; females, length 8.1 mm.-8.4 mm., greatest body width 2.2 mm.-2.5 mm.

Shape.—Fusiform, with greatest body width between one third and one half the body length.

Color.—*Brown form*: General facies stramineous. Eyes brown. Vertex may be tinged with dark brown and hemelytra may be hyaline at apex, appearing dark brown as it overlies the dark brown dorsal surface of the abdomen. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous. *Gray form*: General facies gray; legs testaceous; abdominal venter dark brown with keel and segmental margins of the connexivum gray.

Male structural characteristics.—As viewed from above, the outline of the head is rounded with the vertex extending slightly beyond the anterior margin of the eyes; greatest width of head nine tenths the pronotal humeral width and three to four times the anterior width of the vertex; synthlipsis wide, slightly less than two thirds the anterior width of the vertex; along the median longitudinal axis the head is one half the pronotal length. Pronotum with a faint median ridge on anterior half; humeral width at least twice its median length; lateral margins diverging and one half of the median length; posterior margin convex, medianly concave. Viewed ven-

trally the frons is slightly concave with the facial tubercle flat; apex delimited by a transverse ridge which projects slightly beyond the margin of the head. Rostral prong (Pl. XXXVII fig. 8b) shorter than third rostral segment; apex acuminate. Third rostral segment with a procumbent tuft of hairs along each side of the dorsal surface. Labrum long, with median length one and one-fourth times its basal width; apex truncate. Stridulatory comb (Pl. XXXVII fig. 8c) of approximately eighteen teeth which increases in height from base to apex. Anterior margin of inner surface of front tibia with a short row of two pairs of stout setae. Chaetotaxy of the male front leg as shown on Plate XXXVII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	133	60	..
Middle leg	100	81	54	21
Hind leg	100	83	35	30

Female structural characteristics.—Viewed from above, the anterior outline of the head is rounded with the anterior margin of the vertex extending slightly beyond that of the eyes; greatest width of the head slightly more than eight tenths the pronotal humeral width and three to four times the anterior width of the vertex; synthlipsis wide, two thirds the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the pronotal length. Pronotum with a faint median ridge on the anterior half; humeral width slightly less than twice the median length; lateral margins diverging almost three fourths the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	44	24
Middle leg	100	82	35	23
Hind leg	100	87	34	31

Location of types.—Male holotype, female allotype, three males, one female paratype, Chikkaballapura, S. India, T. V. Campbell in the Snow Entomological Collection. Other paratypes are as follows. In the Snow Entomological Collection: one male, three females, Lucknow, India, I-22-08, Mus. Collr. R. H. In the Indian Museum at Calcutta: Kandaghat, Simla Hills, 3500'-4600', Sta. 2, Pond, VIII-25, B. Chapra; one male, two females, Punjab, Salt Range, Sta. 9, S. L. Hora; four males, three females, Darjiling Dist. E. Himalayas, Nam Ting Pokri above Sitong nr. Mangpur 4800', VII-2-18, S. Kemp; one male, Lucknow, II-4-08, Mus. Collr. R. H.;

five females, Lucknow, II-5-08, Mus. Collr. R. H.; one male, Lucknow, I-16-08, Mus. Collr. R. H.; two males, one female, Lucknow, I-17-08, Mus. Collr. R. H.

Comparative notes.—Though somewhat smaller, this species appears closely related to *Anisops stali* Kirkaldy, as all the distinctive features as borne by the latter species are also present on *A. campbelli* though much reduced in prominence. The two species may be readily separated since the middle tibiae of the males of the latter species lack the inward basal projection bearing the circular group of thickly set, stout, even-length setae as found on *A. stali*.

Data on distribution:

BURMA

S. Shan States, Yawaghee, Heho, 3800, III—29-17, Gravely, one male, one female (Bueno Coll. of F. H. Snow Coll.).

INDIA

Darjeeling, Le Moults, one male, one female (Bueno Coll. of F. H. Snow Coll.).

Kalka, base of W. Himalayas, V—16-11, N. Annandale, two males, one female (F. H. Snow Coll.).

S. India, Bangalore, 3000, X—16-10, Annandale, one female (F. H. Snow Coll.).

Patiala State, Dhurampur, base of Simla Hills, VII—21-11, one female (F. H. Snow Coll.).

Anisops amaryllis Hutchinson

(Pl. XXXVI, fig. 6)

1928. *Anisops amaryllis* Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. I, text fig. 5.

1930. *Anisops amaryllis*, Hutchinson, Ann. Mag. Nat. Hist., vol. VI, Ser. 10, pp. 58-59 (ecological note).

1933. *Anisops amaryllis*, Jaczewski, Linn. Sci. Jour., Zool., vol. XXXVII, p. 345 (ecological note).

Size—Males, length 5.4 mm.-6 mm., greatest body width 1.5 mm.-1.8 mm.; females, length, 5.3 mm.-6.3 mm., greatest body width 1.5 mm.-1.9 mm.

Shape—Small, subfusiform species; lateral margins in anterior half of body almost parallel, converging in posterior half.

Color—*Light form*: General facies testaceous. Eyes brown. Hemelytra may appear dark gray as it is hyaline and overlies the dark brown or black dorsal body surface. Legs stramineous. Abdominal venter dark brown or black with keel and segmental margins of the connexivum stramineous. *Dark form*: General facies black. Eyes dark brown. Vertex and pronotum testaceous. Scutellum dark brown or black; lateral margins may be crimson. Hemelytra hyaline and appear dark gray as they overlies the black dorsal body

surface; margins bordering the scutellum may be tinged with crimson. Leg stramineous. Abdominal venter with keel and segmental margins of the connexivum stramineous.

Male structural characteristics—Viewed from above, the outline of the head is rounded with the greatest width of the head nine tenths the pronotal humeral width and almost six times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is slightly shorter than the pronotum. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and one-half the median length; posterior margin convex, medianly emarginate. Rostral prongs (Pl. XXXVI, fig. 6b) as long as the third rostral segment; apex more or less rounded. Stridulatory comb (Pl. XXXVI, fig. 6c) of approximately twelve even length teeth. Chaetotaxy of the male front leg as shown on Plate XXXVI. The relative lengths of the parts of the legs are as follows:*

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	117	73	..
Middle leg	100	77	38	25

Female structural characteristics—Viewed from above, the outline of the head is rounded; greatest width of the head eight-tenths the pronotal humeral width and five times the anterior width of the vertex; synthlipsis wide, slightly less than one-half the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one-half the length of the pronotum. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	58	28
Middle leg	100	87	43	26
Hind leg	100	84	33	33

Location of types.—Male type from British East Africa (now Kenya Colony) Nairowa Pass, C. S. Betton in the British Museum.

Comparative notes.—This species appears closely allied to *Anisops eros* Hutchinson from which it can be separated by the shape of the stridulatory comb and the chaetotaxies of the front legs of the males. In the latter species the distal teeth of the stridulatory comb are elongate, more than twice as long as the basal elements, whereas in *A. amaryllis* all the teeth of the comb are approximately the same length. The row of three small spines as

* None of the males at my disposal possessed a complete hind leg.

found on the basal inner surface of the male front tarsi of *A. eros* is lacking on the tarsi of the male of *A. amaryllis*.

Data on distribution:

AFRICA

Central Africa, one male, (Basel Nat. Hist. Mus., Switzerland).

Uganda, Lake Naivasha, E. B. Worthington, exchange from the British Museum, one male, one female (F. H. Snow Coll.).

South Rhodesia, Mazoe Valley, VI-10-28, A. Cuthberson, two males, one female (F. H. Snow Coll.).

Anisops elstoni n. sp.

(Pl. XXXVI, fig. 5)

Size.—Males, length 4.3 mm.-4.6 mm., greatest body width 1.2 mm.-1.3 mm.; females, length 5.1 mm.-5.5 mm., greatest body width 1.4 mm.-1.6 mm.

Shape.—Small, subfusiform species; anterior half of body with lateral margin only slightly converging, subparallel, those of posterior half converging.

Color.—General body color stramineous. Eyes brown. Scutellum may be orange or tinged with orange with anterior margin black. Hemelytra hyaline and may have margins adjacent to scutellum orange. Legs stramineous. Abdominal venter dark brown or black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width nine tenths pronotal humeral width, six times the anterior width of vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is at least three fourths the pronotal length. Pronotum with a large median depression; humeral width slightly more than twice the median length; lateral margins diverging and at least one half the median length; posterior margin convex, medianly concave. Facial tubercle flat. Labrum with a few short hairs; basal width equal to median length; apex rounded. Rostral prong longer than third rostral segment. Stridulatory comb (Pl. XXXVI, fig. 5c) composed of about thirteen teeth; apical two greatly reduced in size. Chaetotaxy of the male front leg as shown on Plate XXXVI, fig. 5a. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	115	77	..
Middle leg	100	79	48	24
Hind leg	100	79	31	33

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width nine tenths the pronotal humeral width, five to six times the anterior width of the vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along median longitudinal axis the head is slightly more than three fourths the pronotal length. Pronotum with a faint median depression; humeral width slightly more than twice its median length; lateral margins diverging and one half the median length. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	118	57	36
Middle leg	100	80	37	26
Hind leg	100	79	33	33

Location of types.—Male holotype, female allotype, three male and one female paratypes, S. Australia, Myponga, A. H. Elston, in the Snow Entomological Collection. Other paratypes are as follows. In the Snow Entomological Collection: one male, six females Australia, Brisbane, Queensland, Dec. 1933, H. Hacker; one male, Suifu Szecheun, China, D. C. Graham. In the Harvard Museum of Comparative Zoology: three males, three females, New South Wales, The Dorrigo, 3000', Feb. 1932, Darlington, Harv. Austrl. Exped.

Comparative notes.—A very small species of the same general appearance as *Anisops exigera* Horvath. However the males of this species have a much narrower synthlipsis, one fifth to one sixth the anterior width of the vertex, whereas in *A. elstoni* the synthlipsis is wide, at least one third the anterior width of the vertex. The rostral prong of *A. exigera* is shorter than the third rostral segment and rounded at the apex while that of *A. elstoni* is longer than the third rostral segment and acuminate at the apex.

Data on distribution.—Known only from type series.

Anisops eros Hutchinson*

(Pl. XXXVII, fig. 10)

1928. *Anisops eros* Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. I, pp. 160-161, text fig. 4.

1933. *Anisops eros*, Jaczewski, Linn. Soc. Jour. Zool., Vol. XXXVIII, p. 345 (ecological note).

1933. *Anisops eros*, Hutchinson, Internat. ges. Hydrob. und Hydrog., vol. 28, pt. 5/6, p. 462 (ecological note).

1937. *Anisops eros*, Poisson, Ann. Soc. Ent. France, vol. CVI, p. 117, text fig. 2.

1948. *Anisops eros*, Poisson, Rev. Francaise Ent., vol. XV, p. 168 (ecological note).

Size.—Male, length 4.8 mm., greatest body width 1.2 mm.

Shape.—Small fusiform species; greatest width midway the body length.

* Only a single male specimen of this species was in my material.

Color.—General facies testaceous. Eyes gray brown. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the anterior margin almost straight; greatest width of the head nine tenths the pronotal humeral width and slightly more than six times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the medial longitudinal axis the head is almost as long as the pronotum. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and almost one half the median length; posterior margin convex, medianly emarginate. Facial tubercle only slightly raised. Labrum with its median length slightly less than its basal width; apex rounded. Rostral prong (Pl. XXXVII, fig. 10b) longer than the third rostral segment; apex more or less rounded. Stridulatory comb (Pl. XXXVII, fig. 10c) of approximately fourteen teeth which increase in length toward the middle. Chaetotaxy of the front leg as shown on Plate XXXVII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	127	91	..
Middle leg	100	80	40	25
Hind leg	100	80	33	33

Location of types.—Type material from Uganda, Kampala, III-20-1927, G. L. R. Hancock, in the British Museum.

Comparative notes.—This species is very similar to *Anisops amaryllis* Hutchinson from which it can be successfully separated by the fact that the males of *A. eros* have a short row of three small setae on the inner surface of the basal half of the fore tarsi, which is lacking on the fore tarsus of *A. amaryllis*.

Data on distribution:

AFRICA

Tanganyika Terr., Amani, Feb. 19, 1940, F. X. Williams, one male (Harv. Mus. Comp. Zool.).

Anisops kampalensis Hutchinson*

(Pl. XXXVIII, fig. 15)

1928. *Anisops kampalensis* Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. I, pp. 162-163, text fig. 6.

1933. *Anisops kampalensis*, Hutchinson, Internationale der gesamten Hydrobiologie und Hydrographie, vol. 28, prt. 5/6, p. 462 (ecological note).

Size.—Males, length 4.9 mm., greatest body width 1.3 mm.

* Only two male specimens were available for study.

Shape.—Small, robust, subfusiform species; greatest body width midway the body length.

Color.—General facies black. Eyes brown. Vertex, pronotum testaceous, the latter with irregular hyaline areas on posterior margin, such areas appear black due to the color of the underlying scutellum. Scutellum testaceous with anterior half black. Hemelytra hyaline and appear black due to the black color of the dorsal body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width and five times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is one half the length of the pronotum. Pronotum with its humeral width almost twice the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum broad, basal width equal to the median length; apex rounded. Rostral prong (Pl. XXXVIII, fig. 15b) as long as the third rostral segment; apex acuminate. Stridulatory comb (Pl. XXXVIII, fig. 15c) of approximately eleven teeth, the apical four longer than the basal eight. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	117	88	..
Middle leg	100	82	37	27
Hind leg	100	82	30	30

Location of types.—Type material from Kampala, Uganda in the British Museum.

Comparative notes.—This species is very similar to *A. adonis* Hutchinson, however, the males lack the carinate frons of the latter species.

Data on distribution:

AFRICA

Huat Owanhui, Bessou (Mission) Amont de Fort de Passel, Ouacha, 1804, Dr. J. DeCorse, one male (F. H. Snow Coll.).

Mission Tilho, Ouacha, 1910, Dr. R. Gaillard, one male (Paris Museum).

Anisops paracrinita n. sp.

(Pl. XXXVIII, fig. 12)

Size.—Males, length 4.8 mm., greatest body width 1.3 mm.; females, length 4.8 mm., greatest body width 1.3 mm.

Shape.—Small, fusiform species; greatest body width about mid-way its body length.

Color.—General facies brown. Eyes brown. Vertex, pronotum and scutellum testaceous, the latter dark brown on apical half. Hemelytra hyaline and appearing brown due to the underlying brown dorsal body surface. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width eight tenths the pronotal humeral width and slightly more than six times the anterior width of the vertex; along the median longitudinal axis the head is almost as long as the pronotum. Pronotum with its humeral width slightly more than two and one half times its median length; lateral margins diverging and three fifths the median length; posterior margin convex, medianly emarginate. Facial tubercle with a triangular patch for long hairs whose outer ones are erect. Labrum covered with long hairs; basal width slightly more than its median length; apex rounded. Rostral prong (Pl. XXXVIII, fig. 12b) shorter than the third rostral segment; apex acuminate. Stridulatory comb (Pl. XXXVIII, fig. 12c) of eleven even-length teeth. Chaetotaxy of the front leg as shown on Plate XXXVIII. The relative lengths of the parts of the legs are as follows.

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	90	..
Middle leg	100	76	40	26
Hind leg	100	71	33	33

Female structural characteristics.—Viewed from above, the outline of the head is rounded with its greatest width almost nine-tenths the pronotal humeral width and slightly more than four times the anterior width of the vertex; synthlipsis wide almost one half the anterior width of the vertex; along the median longitudinal axis the head is more than one half the median length. Pronotum with its humeral width two and one fourth times the median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	126	60	40
Middle leg	100	81	40	25
Hind leg	100	81	33	33

Location of types.—Male holotype Queensland, Australia, Coen. C. York, May '32, Harv. Austrl. Exped. Darlington, in the Harvard Museum of Comparative Zoology. Female allotype, one male and one female paratype, Moore Id. Australia, Feb. 20, 1945, B. Milkin in the United States National Museum.

Comparative notes.—Very similar to *Anisops crinita* n. sp. but the two species may be readily separated on the basis of the males. The male of *A. paracrinita* has long hairs on the facial tubercle and for the most part these are erect, whereas the facial tubercle of *A. crinita* has short procumbent hairs. Also the synthlipsis of the latter is much narrower being only at most one fifth the anterior width of the vertex. For comparison of the front legs of the males see Pl. XXXVIII, fig. 12a and Pl. I, fig. 68a.

Data on distribution.—Known only from type series.

Anisops hackeri n. sp.

(Pl. XXXVIII, fig. 13)

Size—Males, length, 5.5 mm.-5.7 mm., greatest body width 1.4 mm.-1.6 mm.; females, length 5.7 mm.-6.0 mm., greatest body width 1.5 mm.-1.7 mm.

Shape—Short, robust, subfusiform species; lateral margins of anterior half of body almost parallel.

Color—Eyes brown; vertex and pronotum testaceous, the former may be tinged with orange, the latter may have its posterior margin hyaline and appear the black color of the underlying surface of the scutellum. Scutellum orange, black along its apical margin. Hemelytra hyaline and appearing gray as it overlies the black dorsal body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width; five times the anterior width of the vertex; synthlipsis wide, slightly less than one half the anterior width of the vertex; along the median longitudinal axis the head is three fifths the pronotal length. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and three fifths the median length; posterior margin convex, slight median emargination. Facial tubercle simple only slightly raised. Labrum with its basal width slightly more than its median length; apex rounded. Rostral prong (Pl. XXXVIII, fig. 13b) as long as the third rostral segment; apex acuminate. Stridulatory comb

(Pl. XXXVIII, fig. 13c) of approximately twenty-four teeth. Chaetotaxy of the male front leg as shown on Plate XXXVIII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	105	79	..
Middle leg	100	86	38	25

Unfortunately neither of the two male specimens at my disposal possess complete hind legs.

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest head width nine tenths the pronotal humeral width; five times the anterior width of the vertex; synthlipsis wide, one-half the anterior width of the vertex; along the median longitudinal axis the head is three fifths as long as the pronotum. Pronotum with its humeral width slightly more than twice its median length, lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	123	61	31
Middle leg	100	82	41	27
Hind leg	100	84	34	33

Location of types.—Male holotype, female allotype, one male, two female paratypes, Brisbane, Australia, Dec. 1932, H. Hacker, in the Snow Entomological Museum.

Comparative notes.—This species appears closely related to *Anisops barrenensis* n. sp., only slightly larger and about the same shape. However, the males of *A. hackeri* lack the large swollen front femur as found on *A. barrenensis*, and the second rostral segment does not extend almost the length of the third rostral segment as in the latter species.

Data on distribution.—Known only from type series.

Anisops hyperion Kirkaldy

(Pl. XXXVIII, fig. 16)

1898. *Anisops hyperion* Kirkaldy, Wiener Ent. Zeit., vol. XVII, p. 141.
 1904. *Anisops hyperion*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 111, 132.
 1914. *Anisops hyperion*, Distant, Nova Caledonia, Zoologie, vol. I, p. 386 (ecological note).
 1923. *Anisops hyperion*, Hale, South Australian Naturalist, vol. IV, no. 3, pp. 124-128, text fig. 1 (determined in error; actually *Anisops thienemanni* Lundblad).
 1923. *Anisops hyperion*, Hale, Rec. South Australian Mus., vol. II, no. 3, pp. 403-412, text fig. 365 (determined in error, actually *Anisops thienemanni* Lundblad).
 1924. *Anisops hyperion*, Hale, South Australian Nat., vol. V, no. 4, p. 135 (determined in error; actually *Anisops thienemanni* Lundblad).

1926. *Anisops hyperion*, Esaki, Ann. Mus. Nat. Hungarici, vol. XXIV, p. 188 (ecological data; determination doubtful).

1930. *Anisops hyperion*, Hutchinson, Proc. Zool. Soc. London, vol. XXIX, p. 145, text fig. 2 (determined in error; actually *Antisops thienemanni* Lund.).

1933. *Anisops hyperion*, Lundblad, Archiv. für Hydrobiologie Suppl., vol. XII, p. 145 (a list of the Indo-australian and Pacific forms of this genus).

Size.—Males, length 6.0 mm.-6.5 mm., greatest width of body 1.5 mm.-1.6 mm.; females, length 6.0 mm.-6.6 mm., greatest body width 1.5 mm.-1.8 mm.

Shape.—Fusiform species; greatest body width midway the length of the body.

Color.—General facies stramineous. Eyes brown. Scutellum may be red orange or only have its margins tinged with orange. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width of the head almost nine tenths the pronotal humeral width and five to six times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is nine tenth the length of the pronotum. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and a slightly more than one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum with its basal width slightly more than the median length; apex rounded; surface of the labrum provided with a few scattered hairs. Rostral prong (Pl. XXXVIII, fig. 16b) almost as long as the third rostral segment; apex acuminate. Chaetotaxy of the male front leg as shown on Plate XXXVIII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	108	76	..
Middle leg	100	86	41	27
Hind leg	100	85	35	35

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head almost nine tenths the pronotal humeral width and five and one half times the anterior width of the vertex; synthlipsis wide, almost one half the anterior width of the vertex; along the median longitudinal axis the head is two thirds as long as the pronotum with its humeral width at least twice its median length; lateral margins diverging and at least one half the median length; posterior margin convex, medianly

emarginate. The relative lengths of the parts of the legs are as follows:*

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	112	51	36
Middle leg	100	83	39	26

Location of types.—Kirkaldy's type material consisting of two females from Rockhampton, Queensland, Australia in the Hamburg Museum. In the Kirkaldy Collection of the Snow Entomological Collection is a male specimen bearing in Kirkaldy's handwriting the label "hyperion." I am designating this specimen the male allotype. It is from Victoria, Alexandria in Australia.

Comparative notes.—Kirkaldy mentioned in 1904 that possibly he had two species mixed. Such was true, for collected along with *A. hyperion* was a new species which I have named *A. deanei*. These two species are superficially very similar; can best be separated on the character of the male rostral prong, which in *A. deanei* has its dorsal margin extending almost to the apex of the third rostral prong whereas that of *A. hyperion* extends only slightly beyond the basal half of the third rostral segment. Also the apex of the third rostral segment of *A. deanei* is considerably wider than the base of the fourth, whereas in the case of *A. hyperion* the two are approximately the same width.

Data on distribution:

AUSTRALIA

Victoria, Alexandria, F. L. Billinghamurst, six males, three females, Kirkaldy Collection (F. H. Snow Coll.)

Anisops tuberculata Poisson

(Pl. XXXVIII, fig. 11; Pl. LVII, fig. 104)

1928. *Anisops tuberculata* Poisson, Bull. Soc. Ent. France, vol. 33, p. 74, text fig. 17.

1929. *Anisops tuberculata*, Poisson, Faune des Colonies Françaises, vol. III, pp. 150-152, text figs. 17, 18, 19.

1948. *Anisops tuberculata*, Poisson, Rev. Française Ent., vol. XV, pp. 167-177, (ecological note).

Size.—Males, length 5.5 mm. 6.0 mm., greatest body width 1.6 mm.-1.7 mm.; females, length 5.4 mm.-6.6 mm., greatest body width 1.5 mm.-1.7 mm.

Shape.—Subfusiform species; greatest body width about midway the body length.

Color.—General facies red brown. Hemelytra with hyaline areas which appear black due to the underlying color of the dorsal body

* Unfortunately none of the female specimens at my disposal possessed a complete hind leg.

surface. Legs red brown. Abdominal venter dark brown with keel and segmental margins of the connexivum red brown.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head almost equal to the pronotal humeral width and five to six times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is almost two thirds the length of the pronotum. Pronotum with its humeral width twice the median length; lateral margins diverging and two thirds the median length; posterior margin convex, medianly emarginate; anterior margin between the margins of the eyes bearing a large tubercle. Facial tubercle slightly raised. Labrum with its basal width one and one half the median length; apex rounded. Rostral prong (Pl. LVII, fig. 104) longer than the third rostral segment; apex rounded. Stridulatory comb (Pl. XXXVIII, fig. 11b) highly irregular, apical two teeth large and spatulate. Chaetotaxy of the male front leg as shown on Plate XXXVIII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	105	64	..
Middle leg	100	85	40	37
Hind leg	100	86	33	33

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width and between five and six times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the length of the pronotum. Pronotum with its humeral width twice its median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	115	51	31
Middle leg	100	85	40	25
Hind leg	100	86	34	34

Location of types.—Type material from Cameron in the Paris Museum.

Comparative notes.—This species, by its large tubercle on the anterior margin of the male pronotum is not readily confused with any other of the genus. However, in general body shape it is similar to *A. debilis*, though it is slightly larger.

Data on distribution:

AFRICA

French Congo, Lake Onango, F. C. Good, Holland Collection, exchange from Carneige Museum, nine males, six females (F. H. Snow Coll.).

Cameron, W. Africa, Samgmelina, IV-16th to 19th-32 five males, one female (F. H. Snow Coll.).

Congo Francaise, N'Gomo, Bas Ogoque, 1906, E. Haug, one male, one female (Paris Museum).

Congo, Ogaque, Sam Kita, 1910, R. Ellenberger, one female (Paris Museum).

Anisops nodulata n. sp.

(Pl. XXXVIII, fig. 14)

Size.—Males, length, 4.6 mm.-4.8 mm., greatest body width 1.2 mm.-1.3 mm.; females, length, 4.8 mm.-5.4 mm., greatest body width 1.3 mm.-1.6 mm.

Shape.—Small fusiform species, with greatest width almost mid-way the body length.

Color.—General facies stramineous. Eyes brown. Hemelytra may be hyaline and such areas appear black as they overlie the black dorsal body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—View from above, the outline of the head is rounded with its greatest width eight to nine tenths the pronotal humeral width, five times the anterior width of the vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along the median longitudinal axis the head is three fourths the pronotal length. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle flattened and slightly concave. Labrum short; basal width one and two thirds its median length; apex rounded. Rostral prong longer than third rostral segment which is medianly carinate on anterior surface, carina with two nodules (Pl. XXXVIII, fig. 14b). Anterior femur with dorsal and ventral margins almost parallel; apex rounded (Pl. XXXVIII, fig. 14a). Stridulatory comb (Pl. XXXVIII, fig. 14c) of approximately fifteen teeth, longest ones midway between base and apex. Chaetotaxy of male front leg as shown on Plate XXXVIII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	108	80	..
Middle leg	100	87	40	25
Hind leg	100	91	32	28

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width nine tenths the pronotal humeral width, four to four and one half times the anterior width of the vertex; synthlipsis wide, almost one half the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the pronotal length. Pronotum with humeral width slightly more than twice the median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	50	33
Middle leg	100	84	36	29
Hind leg	100	87	30	30

Location of types.—Male holotype, female allotype, four male paratypes, Philippine Islands, Pangasinan, rice fields, 11-19-34, Z. Abalos in the Snow Entomological Collection. Other paratypes are as follows. In the Snow Entomological Collection: two females, Philippine Isl. Dagupan Pangasinan, Sept. 2, 1936, Roman Abalos; two females, Philippine Isl., Baguio, N. T. Prov. Apr. 26, 1936, Roman Abalos; two males, four females, New Guinea, Rigo, 1889, L. Loria.

Comparative notes.—This species is about the same size as *A. exigera* Horvath, from which it differs in having a much wider synthlipsis, front femur of the males rounded and a nodulate carina on the anterior surface of the third rostral segment.

Data on distribution:

AUSTRALIA

New Queensland, Palm Is. G. F. Hill, one male (Bueno Coll. of F. H. Snow Coll.).

Anisops apicalis Stål

(Pl. XXXIX, fig. 17)

1855. *Anisops apicalis* Stål, Öfversigt af Kongl. Vetenskaps-Akademiens Förhandlingar, vol. XII, p. 89.

1865. *Anisops apicalis*, Stål, Hemiptera Africana, vol. III, p. 192.

1904. *Anisops apicalis*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 117-118, 132.

1926. *Anisops apicalis*, Jaczewski, Annalibus Zoologicis Musei Polonici Historiae Naturalis, vol. V, No. 2, p. 91, text figs. 50, 51, 52, 53.

1929. *Anisops apicalis*, Hutchinson, Ann. South African Mus., vol. XXV, pp. 406-408, Pl. XXIX, fig. 5; Plate XXX, fig. 21.

1930. *Anisops apicalis*, Hutchinson, Proc. Zool. Soc. London, vol. XXIX, pt. 2, p. 450 (ecological note).

1930. *Anisops apicalis*, Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. VI, p. 59 (ecological note).

1933. *Anisops apicalis*, Jaczewski, Linn. Sci. Jour. Zool., vol. XXXVII, p. 345 (ecological note).

1933. *Anisops apicalis*, Hutchinson, Internat. Rev. ges. Hydriob. Hydrog., vol. 28, pt. 5/6, p. 446.

1948. *Anisops apicalis*, Poisson, Mem. Inst. Scient. Madagascar, Ser. X, vol. I, p. 108 (ecological note).

Size.—Males, length 4.8 mm., greatest body width 1.4 mm.; females, length 4.5 mm., greatest body width 1.6 mm.

Shape.—Small, robust, fusiform species with greatest body width slightly before the middle of the body.

Color.—General facies stramineous. Eyes dark brown. Hemelytra with a subapical transverse brown band. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head equal to the pronotal humeral width and five and one half times the anterior width of the vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along the median longitudinal axis the head is slightly more than two thirds the length of the pronotum. Pronotum with its humeral width almost twice its median length; lateral margins almost parallel only slightly diverging, three fifths the median length; posterior margin almost straight. Scutellum greatly reduced; basal width one and three fourths the median length. Wings greatly reduced and appear nonfunctional. Facial tubercle flat with lateral margins posterior to the eyes converging. Labrum narrow and long; median length one and one third its basal width; apex rounded. Rostral prong (Pl. XXXIX, fig. 17b) equal to the length of the third rostral segment; apex more or less rounded. Anterior leg (Pl. XXXIX, fig. 17a) with dorsal and ventral femoral margins almost parallel, apex truncate; stridulatory comb (Pl. XXXIX, fig. 17c) of approximately nineteen long slender teeth which decrease in length at the apex. Chaetotaxy of the male front leg as shown on Plate XXXIX. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	119	79	..
Middle leg	100	81	33	28
Hind leg	100	95	36	35

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head slightly less than the humeral width of the pronotum and almost five and one half times the anterior width of the vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along the

median longitudinal axis the head is as long as the pronotum. Pronotum short with its humeral width slightly more than three times its median length; lateral margins only slightly diverging and two thirds the median length; posterior margin straight. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	112	55	36
Middle leg	100	87	39	28
Hind leg	100	97	25	25

Location of types.—Type material from Caffraria in the Stockholm Museum.

Comparative notes.—This species appears very similar to *Anisops hungerfordi* Poisson from which it can be separated on the basis of the scutellum which is greatly reduced in *A. apicalis*, basal width one and three fourths its median length; whereas in *A. hungerfordi* the basal width is only one and two sevenths the median length. Also the wings of the latter species are not brachypterous.

Data on distribution:

AFRICA

Ugando, Entebbe, VIII-4-1929, G. H. E. Hopkins, gift to H. B. Hungerford from G. E. Hutchinson, one male, one female (F. H. Snow Coll.).

Afrique Orient. Angl., Zanzibar, Riviera Mivera, 1904, Ch. Alluaud, one male (Paris Museum).

Anisops canariensis perplexa Poisson

(Pl. XXXIX, fig. 20)

1929. *Anisops perplexa* Poisson, Bull. Soc. Hist. Nat. Afrique du Nord, vol. XX, pp. 87-89, figs. 1, 2, 3, 113.

1933. *Anisops perplexa*, Hutchinson, Internat. ges. Hydrob. und Hydrog., vol. 28, pt. 5/6, p. 452 (ecological note).

1934. *Anisops perplexa*, Poisson, Bull. Soc. Hist. Nat. Afrique du Nord, vol. XXV, pp. 135-137.

1948. *Anisops canariensis perplexa*, Poisson, Inst. Rech. Sahar. Univ. D'Alger, p. 5, text figs. 14, a, c. (Places *A. perplexa* as a subspecies of *A. canariensis* Noulhier.)

Size.—Males, 6.0 mm., greatest body width 1.5 mm.; females, length 5.9 mm.-6.3 mm., greatest body width 1.5 mm.-1.6 mm.

Shape.—Slightly fusiform species; greatest body width about midway the length of the body.

Color.—General facies stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the anterior margin almost straight; greatest width of the head almost equal to the pronotal humeral width and almost six times the anterior width of the vertex; synth-

lipsis wide, slightly more than one third the anterior width of the vertex; along the median longitudinal axis the head is eight tenths the pronotal length. Pronotum with its humeral width almost twice the median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly concave. Facial tubercle slightly raised. Labrum short, basal width one and one half the median length. Rostral prong (Pl. XXXIX, fig. 20b) longer than the third rostral segment; apex acuminate. Stridulatory comb (Pl. XXXIX, fig. 20c) of approximately twenty-three teeth which decrease slightly in length from base to apex. Chaetotaxy of the male front leg as shown in Plate XXXIX. The relative lengths of the parts of the legs are as follows:*

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	115	78	..
Middle leg	100	86	38	25

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head nine tenths the pronotal humeral width and slightly more than five times the anterior width of the vertex; synthlipsis wide, one half the anterior width of vertex; along the median longitudinal axis the head is three fifths the length of the pronotum. Pronotum with its humeral width slightly more than twice the median length; lateral margins of the pronotum diverging and three fifths the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	121	54	31
Middle leg	100	78	37	22
Hind leg	100	78	28	28

Location of types.—Type material from Algeria is in Poisson's Collection.

Comparative notes.—This subspecies differs from *A. canariensis canariensis* by the fact that the anterior tarsi of the males have a median row of four small setae in the basal half of the inner surface. It is remarkably similar to *A. debilis* Gerst. and differs from it primarily by the width of the synthlipsis which is one third the anterior width of the vertex instead of one sixth the anterior width of the vertex as in *A. debilis*.

* Hind legs on two male specimens in my material missing.

Data on distribution:

AFRICA

Algerie, S. Culomb-Bachae, 1912; P. Germain, one male, one female in the F. H. Snow Collection, fourteen males in the Paris Museum.

Tripolitaine, Marais de Tadjouran, Pres de Tripoli, 1901, Ch. Alluaud, one male (Paris Museum).

Anisops edepol Kirkaldy

(Pl. XXXIX, fig. 19; Pl. LIV, fig. 94)

1899. *Anisops edepol* Kirkaldy, Ann. Soc. Ent. France, vol. LXVIII, p. 107.

1904. *Anisops edepol*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 119, 132. Referring also to this species:

1899. *Anisops erebus*, Kirkaldy, Ann. Soc. Ent. France, vol. LXVIII, pp. 107-108.

1904. *Anisops erebus*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 119-132.

1948. *Anisops erebus*, Poisson, Mem. Inst. Sci. Madagascar, Ser. A, vol. I, text fig. 18, p. 109. (Poisson mentions that the male of the species has not been described.)

1906. *Anisops Kirkaldyanus*, Bergroth, Wiener Ent. Zeit., vol. XXV, pp. 112 (Bergroth proposes the name *Kirkaldyanus* for *edepol*).

Size.—Males, length 4.5 mm.-4.8 mm., greatest body width 1.6 mm.-1.8 mm.; females, length 5 mm.-5.5 mm., greatest body width 1.8 mm.-2.1 mm.

Shape.—Small, robust fusiform species, greatest body width about two fifths the body length.

Color.—*Brown form*: General facies stramineous. Eyes brown. Legs stramineous. Abdominal venter dark brown with keel and segmental margins stramineous. *Dark form*: General facies black. Eyes brown. Vertex, pronotum flavus. Hemelytra hyaline and appear black due to the underlying black body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with its greatest width nine tenths the pronotal humeral width and six times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is only slightly shorter than the length of the pronotum. Pronotum with its humeral width over twice its median length; lateral margins only slightly diverging and over one half the median length; posterior margin straight. Facial tubercle swollen and bearing a median, short, ventrally directed spur. Labrum very short; basal width one and one half the median length; apex rounded. Rostral prong (Pl. LIV, fig. 94) short and narrow; shorter than third rostral segment; apex rounded. Stridulatory comb (Pl. XXXIX,

fig. 19b) of approximately seven teeth which increase in length from base to apex. Chaetotaxy of the male front leg as shown on Plate XXXIX. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	135	85	..
Middle leg	100	85	35	30
Hind leg	100	90	25	25

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head eight tenths the pronotal humeral width and five times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is slightly more than half the length of the pronotum. Pronotum with its humeral width slightly more than twice the median length; lateral margins only slightly diverging and slightly more than one half the median length; posterior margin straight. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	131	55	42
Middle leg	100	85	40	30
Hind leg	100	93	30	30

Location of types.—Part of the type material from Madagascar in the Paris Museum. One male and one female cotype (exchange from Paris Museum) in the F. H. Snow Collection. The female type of *A. erebus* Kirkaldy in the F. H. Snow Collection.

Comparative notes.—The robustness and small size of this species makes it appear superficially similar to *A. apicalis* Stål. However the males of *A. edepol* lack the apically enlarged front femur with its truncate apex as found on the males of *A. apicalis*. Also the male facial tubercle of the latter species is not swollen and bearing the short projection as on *A. edepol*. The wings of *A. edepol* are not brachypterous.

Remarks: I was fortunate in having at my disposal the female type of *A. erebus* and a male and female cotype of *A. edepol*. Examination of the two groups showed immediately that they were identical. Therefore I am placing *A. erebus* as a synonym of *A. edepol* as the latter has page priority.

Data on distribution:

MADAGASCAR

Madagascar, P. Camboue, one male, one female (co-types) (F. H. Snow Coll.).

Tananarive, 1921, R. Decary, one male, one female (Paris Museum).

Region du Sud-est, Vallee du Fanjakira Isaka, 1901, Ch. Alluaud, one male, one female (Paris Museum).

Maroantsetra, purchased fr. Dr. O. Standinger, two females (F. H. Snow Coll.).

Diego-Suarez, 1893, Ch. Alluaud, one female (type of *A. erebus*) (F. H. Snow Coll.).

Anisops timorensis n. sp.*

(Pl. XXXIX, fig. 18)

Size.—Male, length 5.4 mm., greatest body width 1.5 mm.

Shape.—Small, subfusiform species, lateral margins in posterior half of body converging, those of anterior half almost parallel.

Color.—General facies gray. Eyes gray brown. Vertex, pronotum, and scutellum testaceous; pronotum mostly hyaline and appearing black as it overlies the black anterior margin of the scutellum. Hemelytra, with claval margins tinged with crimson; remainder hyaline and appearing dark gray as it overlies the black dorsal body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with anterior margin almost straight; greatest width of head nine tenths the pronotal humeral width, slightly more than five times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is three fifths the pronotal length. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and three fifths the median length; posterior margin convex, medianly emarginate. Facial tubercle only slightly raised. Labrum moderately long, median length equal to its basal width; apex rounded. Rostral prong (Pl. XXXIX, fig. 18b) with apex acuminate. Basal half of third rostral segment covered with an extension of the second rostral segment along its posterior margin. Front femur (Pl. XXXIX, fig. 18a) with apex rounded. Stridulatory comb (Pl. XXXIX, fig. 18c) of approximately twenty-four teeth. Chaetotaxy of the male front leg as shown on Plate XXXIX. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	111	83	..
Middle leg	100	77	45	23
Hind leg	100	83	35	35

Location of types.—Male holotype, Bagaia, Timor, in the Basel Naturhistorisches Museum in Switzerland.

Comparative notes.—Though much smaller, it is very similar in

* Only a single male specimen available for study.

general appearance to *A. occipitalis* Breddin. However the males of the latter lack the extension of the second rostral segment along the third rostral segment as found on the male of *A. timorensis*. For comparison of the chaetotaxies of the front legs of the males of the two see Plate XXXIX, fig. 18a and Plate XXXIX, fig. 22a.

Data on distribution.—Known only from type locality.

Anisops occipitalis Breddin

(Pl. XXXIX, fig. 22)

1905. *Anisops occipitalis* Breddin, *Mittel. Naturh. Mus. Hamburg*, vol. XX, p. 152.

1933. *Anisops occipitalis*, *Lundblad, Arch. für Hydrob., Suppl. vol. XII*, pp. 145, 158-160, text fig. 154.

Size.—Males, length 6.6 mm.-7.2 mm., greatest body width 1.9.-2.1 mm.; females, length 6.6 mm.-7.2 mm., greatest width of body 1.6 mm.-2.1 mm.

Shape.—Robust, slightly fusiform species; lateral margins in anterior half of body only slightly converging.

Color.—General facies stramineous or testaceous. Scutellum may be testaceous, black, or black only on apical half, posterior half testaceous or stramineous. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the head is broad, with its outline rounded; greatest width of head eight to nine tenths the pronotal width and six and one half times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is slightly more than two thirds the length of the pronotum. Pronotum with its humeral width two and one half times its median length; lateral margins diverging and about two thirds the median length; posterior margin convex, medianly emarginate. Facial tubercle only slightly raised. Labrum with its basal width slightly more than its median length; apex rounded; covered with short procumbent hairs. Rostral prong (Pl. XXXIX, fig. 22b) equal to or slightly longer than the third rostral segment; apex acuminate. Stridulatory comb (Pl. XXXIX, fig. 22c) of about twenty teeth which decrease in width from base to apex. Chaetotaxy of the front leg as shown on Plate XXXIX. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	111	73	..
Middle leg	100	76	40	24
Hind leg	100	82	29	27

Female structural characteristics.—Viewed from above, the outline of the head is rounded with its greatest width eight to nine tenths the pronotal humeral width and five to six times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is two thirds the length of the pronotum. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and two thirds the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	113	50	29
Middle leg	100	77	38	23
Hind leg	100	81	29	29

Location of types.—Breddin's type female from Buitenzorg, Java, in the Hamburg Museum.

Comparative notes.—Very similar in size and general appearance to *Anisops leucothea* Esaki from which it can best be distinguished on the basis of the males. The male of *A. leucothea* have the greatest width of the head equal to the pronotal humeral width and the lateral margins of the pronotum are almost parallel whereas in this species the greatest width of the head is about nine tenths the pronotal humeral width and the lateral margins of the pronotum are diverging.

Data on distribution:

JAVA

Buitenzorg, Apr. to Dec. 1896, D. G. Fairchild, fifteen males, fourteen females, Kirkaldy Collection (F. H. Snow Coll.).

Buitenzorg, 1875, G. B. Ferrari, one female, Kirkaldy Collection (F. H. Snow Coll.).

NEW GUINEA

Port Moresby, Guigno, 1889, L. Loria, two males, three females, Kirkaldy Collection (F. H. Snow Coll.).

Rigo, Luglio, 1889, L. Loria, seventeen males, eleven females, Kirkaldy Collection (F. H. Snow Coll.).

NEW CALEDONIA

Noumea, A. Fauvel, one male, Kirkaldy Collection (F. H. Snow Coll.).

AUSTRALIA

Sir Graham Moore Id. II-20-1945, B. Malkin, two males, one female (U. S. Nat. Mus.).

Barren River nr. Barren Waters, IX-2-38, R. G. Wind, one male (F. H. Snow Coll.).

Anisops coutierei n. sp.

(Pl. XXXIX, fig. 21)

Size.—Males, length 5.4 mm.-5.8 mm., greatest body width 1.4 mm.-1.6 mm.; females, length 5.8 mm.-6.8 mm., greatest body width 1.5 mm.-1.8 mm.

Shape.—Subfusiform species; greatest body width about midway the body length.

Color.—General facies testaceous. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width and five to six times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is one half the pronotal length. Pronotum with its humeral width twice its median length; lateral margins diverging, almost three fifths the median length; posterior margin convex, medianly emarginate. Facial tubercle only slightly raised. Labrum short and broad; basal width one and one half the median length; apex rounded. Rostral prong (Pl. XXXIX, fig. 21b) longer than the third rostral segment; apex acuminate. Stridulatory comb, (Pl. XXXIX, fig. 21a) of approximately twenty teeth, decreasing slightly in length at apex. Chaetotaxy of the male front leg as shown on Plate XXXIX. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	108	72	..
Middle leg	100	85	40	25
Hind leg	100	79	32	32

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head nine tenths the pronotal humeral width and five to six times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is three fifths the length of the pronotum. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and three fifths the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	114	51	36
Middle leg	100	83	38	25
Hind leg	100	77	30	30

Location of types.—Male holotype, female allotype, one male and one female paratypes Africa, Djibouti, 1897, H. Coutiere, in the Paris Museum. Two male and two female paratypes (same collection data as above) in the F. H. Snow Collection.

Comparative notes.—Very closely related to *Anisops debillis* Gerst. from which it can be distinguished by its wider synthlipsis which is one half the anterior width of the vertex instead of one fifth the anterior width of the vertex. Also the male front femur is slightly rounded at the apex whereas in *A. debillis* it is acuminate.

Data on distribution.—Known only from type series.

Anisops pellucens Gerstaecker

(Pl. XL, fig. 26)

1873. *Anisops pellucens* Gerstaecker, Deeken's Reise in Ost Africa III, pt. 2, pp. 424-425.
 1929. *Anisops pellucens*, Hutchinson, Ann. South African Mus., vol. XXV, pt. 2, pp. 384-385, Pl. XXIX, fig. 2; Pl. XXX, fig. 10; Pl. XXXI, fig. 2.
 1930. *Anisops pellucens f. pellucens*, Hutchinson, Proc. Zool. Soc. London, vol. XXIX, pt. 2, p. 445.
 1930. *Anisops pellucens f. splendida*, Hutchinson, Proc. Zool. Soc. London, vol. XXIX, pt. 2, p. 445.
 1930. *Anisops pellucens f. pellucens*, Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. VI, pp. 57-58 (ecological note).
 1933. *Anisops pellucens*, Jazewski, Linn. Soc. Jour., Zool., vol. XXXVIII, p. 345.
 1937. *Anisops pellucens*, Poisson, Ann. Soc. Ent. France, vol. CVI, p. 118, fig. 5 (discusses the color forms of Hutchinson).
 1937. *Anisops pellucens f. rubroscutellata*, Poisson. (*loc. cit.*), p. 119.
 1937. *Anisops pellucens f. grandis*, Poisson, (*loc. cit.*), p. 120. (I have raised this to specific level.)
 1940. *Anisops pellucens f. pellucens*. Poisson, Bull. Mus. Royal Hist. Nat. Belgique, vol. XVII, no. 29, p. 19, (ecological note).
 1941. *Anisops pellucens*, Poisson, Rev. Franc. Ent., vol. VIII, p. 97, (ecological note).
 1948. *Anisops pellucens f. pellucens*, Poisson, Mem. Inst. Sci. Madagascar, Ser. A, vol. I, pt. 2, p. 108 (ecological note).

Referring to this species also:

1899. *Anisops nivea*, Kirkaldy, Ann. Soc. Ent. France, vol. LXVIII, p. 105 (determined in error).
 1901. *Anisops nivea*, Kirkaldy, The Entomologist, vol. XXXIV, p. 5, (determined in error).
 1904. *Anisops nivea*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, p. 119, 132 (determined in error).
 1908. *Anisops nivea*, Kirkaldy, Sjostedt: Wissenschaften Ergebn. der Schwed. Zool. Exped., Hemiptera, vol. XII, p. 24 (determined in error).
 1928. *Anisops nivea*, Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. I, p. 164 (determined in error).
 1929. *Anisops nivea*, Poisson, Faune des Colonies Francaise, vol. III, pp. 154-155, text fig. 22.
 1898. *Anisops ciliata*, Kirkaldy, Ann. Mus. Civ. Stor. Nat. Genova, vol. XXIX (determined in error).
 1892. *Anisops scutellaris*, De Carlini, Ann. Mus. Civ. Stor. Nat. Genova Ser. 2, vol. XII (XXXII), p. 11 (determined in error; no description given, only size; probably this species).
 1895. *Anisops scutellaris*, De Carlini, (*loc. cit.*), vol. XXXV, p. 19 (determined in error; no description given, only size; probably this species).

Size.—Males, length 9.0 mm.-9.6 mm., greatest body width 2.4 mm.-2.8 mm.; females, length 9.6 mm.-9.9 mm., greatest body width 2.2 mm.-2.7 mm.

Shape.—Large fusiform species, widest about midway the length of the body.

Color.—General facies stramineous or gray. Eyes brown. Scutellum may be red with anterior margin black, entirely red or testaceous, or entirely black. Hemelytra gray or stramineous and hyaline and appear darker due to the underlying darker dorsal body surface. Legs stramineous. Abdominal venter brown or dark brown with keel and segmental margins of the connexivum testaceous or stramineous. The latter may be tinged with red.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head eight to nine tenths the pronotal humeral width and six times the anterior width of the vertex; synthlipsis wide, one half or more the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the length of the pronotum. Pronotum with its humeral width almost twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised with a few, small scattered hairs. Labrum short and broad; basal width one and eight tenths the median length. Rostral prong (Pl. XL, fig. 26b) slightly shorter than the third rostral segment; apex more or less blunt. Stridulatory comb (Pl. XL, fig. 26c) of approximately twenty-two teeth which increase slightly in length from the base to the apex. Chaetotaxy of the front leg as shown on Plate XL. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	80	..
Middle leg	100	87	38	25
Hind leg	100	80	30	28

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head eight tenths the pronotal humeral width and five to six times the anterior width of the vertex; synthlipsis wide, almost two thirds the anterior width of the vertex; along the median longitudinal axis the head is approximately one half the length of the pronotum. Pronotum with its humeral width slightly more than twice the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	117	50	25
Middle leg	100	90	37	25
Hind leg	100	77	27	27

Location of types.—Gerstaecker's type material in the Berlin Museum.

Comparative notes.—This species along with *Anisops letitia* Hutchinson is the largest known species from the African mainland. Though only slightly larger than *A. letitia* it can be readily distinguished from it by the fact that the latter species has the posterior margin of the pronotum convex and not medianly emarginate, as in *A. pellucens*.

Data on distribution:

AFRICA

Angola, St. Paul de Loando, two females (U. S. Nat. Mus.).

St. Paul, two females (F. H. Snow Coll.).

?—Paru, one male (F. H. Snow Coll.).

East Africa, IV-28-1948, F. X. Williams (Harv. Mus. Comp. Zool.).

Tanganyika Terr. Amani, Feb. 1948, F. X. Williams, two males, two females (F. H. Snow Coll.), four males, twelve females (Harv. Mus. Comp. Zool.).

Reg. de Zinder, Dungass, Mission Tikho, 1910, Dr. R. Gaillard, one female (Paris Museum).

Abyssinia, Plaine Danakil, Maro, 1903, Dr. J. Rogers, one female (Paris Museum).

Souden-Egyptian, Roseires, Haut Nil Bleu, 1907, Ch. Alluaud, one male, one female (Paris Museum).

Senegal, one male (Paris Museum).

Africa Orient. Anglo, Kisoumou, Victoria-Kyanza, 1904, Ch. Alluaud, two males, five females (Paris Museum).

Belgium Congo: Eala, XI-1935, J. Ghesquiere, three females (Belgium Museum).

South Africa: Belagoa, Coll. Juond., one male (Basel. Nat. Hist. Mus. Switzerland).

Anisops malkini n. sp.*

(Pl. XL, fig. 23)

Size.—Male, length 6.9 mm.; greatest body width 1.6 mm.

Shape.—Fusiform species with greatest width about midway the body length.

Color.—General facies stramineous. Eyes brown. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head nine tenths the pronotal humeral width, five to six times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is three fourths the pronotal length. Pronotum with its humeral width

* Only one male specimen was available for study.

almost twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. Frons depressed and flat, terminated by a transverse ridge at its apex. Labrum short, with the basal width one and one fifth its median length; apex rounded. Rostral prong (Pl. XL, fig. 23b) slightly shorter than the third rostral segment; apex acuminate. Stridulatory comb (Pl. XL, fig. 23c) of about fifteen teeth with the longest midway between the base and apex. Chaetotaxy of the front leg as shown on Plate V. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	68	..
Middle leg	100	84	40	22
Hind leg	100	82

Unfortunately, the first and second tarsal segments of the hind legs were lacking.

Location of types.—Male holotype, Darwin NT, Australia, III-25-45, B. Malkin, in the United States National Museum.

Comparative notes.—Though much larger than *Anisops crinita* n. sp., this species has the flattened frons as possessed by *A. crinita*. There is no danger of confusing the two for in addition to the size difference, *A. malkini* does not have the hairy frons of *A. crinita* and also the chaetotaxies of the front legs of the males is decidedly different.

Data on distribution: Known only from type locality.

Anisops evansi n. sp.

(Pl. XLI, fig. 27)

Size.—Males, length 6.9 mm., greatest body width 1.6 mm.; females, length 6.7 mm., greatest body width 1.4 mm.

Shape.—Fusiform, broadheaded species; greatest body width midway the body length.

Color.—General facies gray. Eyes brown. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the vertex extending slightly beyond the anterior margin of the eyes; greatest width of the head slightly more than the pronotal humeral width, slightly more than six times the anterior width of the vertex; synthlipsis wide, three fourths the anterior width of the vertex; along the median longitudinal axis the head is slightly shorter than the pronotum. Pronotum with its

humeral width approximately one and five sevenths its median length; lateral margins almost parallel only slightly diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. Facial tubercle flat, only slightly raised. Labrum short with long hairs arising at base and extending almost the length of the labrum; basal width one and one third the median length; apex rounded, almost truncate. Rostral prong (Pl. XLI, fig. 27b) shorter than third rostral segment; apex acuminate. Stridulatory comb (Pl. XLI, fig. 27c) of approximately twenty teeth, basal seven longer than the apical thirteen. Chaetotaxy as shown on Plate XLI. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	133	86	..
Middle leg	100	81	34	22
Hind leg	100	78	32	32

Female structural characteristics.—Viewed from above, the outline of the head is more or less conical with the vertex extending slightly beyond the anterior margins of the eyes; greatest width of head nine tenths the pronotal humeral width, four times the anterior width of the vertex; synthlipsis wide, two thirds the anterior width of the vertex; along the median longitudinal axis the head is slightly more than two thirds the pronotal length. Pronotum with its humeral width twice its median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	131	56	31
Middle leg	100	88	38	23
Hind leg	100	83	30	30

Location of types.—Male holotype, female allotype, Tasmania, Lake Dakerton, II-1940, J. W. Evans, in the Snow Entomological Collection.

Comparative notes.—Though slightly smaller than *Anisops tasmaniaensis* n. sp., *A. evansi* appears closely related to it. The males of the two species serve as a ready means of separation for that of the latter has the head wider than the pronotum whereas in the former the head is at most only equal to the pronotal width. Also the males of *Anisops tasmaniaensis* lack the long hairs as found on the labrum of *A. evansi*. For comparison of the chaetotaxies of the front legs of the males see Plate XLI, fig. 27a, and Plate XLVII, fig. 58a.

Data on distribution.—Known only from type series.

Anisops gratus Hale

(Pl. XLII, fig. 31)

1923. *Anisops gratus* Hale, Rec. South Australian Mus. vol. II, no. 3, pp. 413-414, text fig. 369.

1933. *Anisops gratus*, Lundblad, Archiv für Hydrob., Suppl. vol. XII, p. 145 (a list of Indo-australian and Pacific forms of this genus).

Size.—Males, length 7.2 mm.-7.8 mm., greatest body width 1.9 mm.-2.1 mm.; females, length 7.2 mm.-7.8 mm., greatest body width 1.9 mm.-2.1 mm.

Shape.—Fusiform species; greatest body width about midway the body length.

Color.—General facies stramineous or testaceous. Eyes brown. The testaceous areas are often tinged with orange on the scutellum. Legs stramineous. Abdominal venter testaceous or stramineous with irregular brown areas appearing on each sternite.

Male structural characteristics.—Viewed from above, the outline of the head is rounded, with the anterior margin of the head almost straight; greatest width of head nine tenths the pronotal humeral width and four to five times the anterior width of the vertex; synthlipsis wide, approximately one third the anterior width of the vertex; along the median longitudinal axis the head varies from almost one half to one half the length of the pronotum. Pronotum with its humeral width almost twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate; dorsal surface with a median longitudinal depression. Facial tubercle only slightly raised. Labrum with its basal width one and one fifth its median length; apex rounded. Rostral prong (Pl. XLII, fig. 31b) longer than the third rostral segment; apex acuminate. Stridulatory comb (Pl. XLII, fig. 31c) of approximately sixteen teeth. Chaetotaxy of the front leg as shown on Plate XLII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	111	65	..
Middle leg	100	73	35	20
Hind leg	100	85	37	37

Female structural characteristics.—Viewed from above, the outline of the head is rounded with the vertex extending slightly beyond the anterior margins of the eyes; greatest width of the head eight tenths the pronotal humeral width and three to four times the anterior width of the vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along the median longitudinal

axis the head is almost one half the pronotal length. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and eight tenths the median length; posterior margin convex, medianly emarginate, dorsal surface with the same median depression as found on the males. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	118	50	27
Middle leg	100	89	41	22
Hind leg	100	45	38	38

Location of types.—Type material, Broken Hill, New South Wales, Australia, F. W. Shepherd in the South Australian Museum. Two male, and four female cotypes, Broken Hill, New South Wales, Australia, Fred W. Shepherd in the Snow Entomological Collection.

Comparative notes.—This species is of about the same size as *A. doris* Kirk. but the males lack the broad rounded head and the narrow anterior width of the vertex as found on the males of *A. doris*. For comparison of the chaetotaxies of the front legs of the males see Pl. XLII, fig. 31a and Pl. XLVI, fig. 53a.

Data on distribution:

AUSTRALIA

New South Wales, Broken Hill, Fred W. Shepherd, three females (F. H. Snow Coll.).

New South Wales, Broken Hill, in nine mile dam, IV-23-44, C. E. Chadwick, one male, five females (Dept. of Agric., N. S. W., Austr.).

New South Wales, Broken Hill, IV-10-44, C. E. Chadwick, nine females (Dept. of Agric. N. S. W., Austr.).

New South Wales, Broken Hill, 1944, C. E. Chadwick, two females (Dept. of Agric. N. S. W., Austr.).

New South Wales, Imperial Dam, XII-31-1925, F. W. Shepherd, thirty-two males, eleven females (F. H. Snow Coll.).

Bordertown, one female (F. H. Snow Coll.).

Sir Graham Moore Id. II-20-45, B. Malkin, two females (F. H. Snow Coll.).

Anisops gobana Poisson

(Pl. XLI, fig. 28)

1940. *Anisops gobana* Poisson, Bull. Mus. Roy. Hist. Nat. Belgique, vol. XVI, no. 27, pp. 10-12, text figs. 13-16.

Size.—Males, length 6.9 mm. greatest body width 2.1 mm.; females, length 7.2 mm., greatest body width 2.1 mm.

Shape.—Subfusiform species; lateral margins almost parallel in anterior half, converging in posterior half.

Color.—General facies black. Eyes brown. Vertex and pronotum stramineous, the latter with a faint dark brown median longi-

tudinal stripe. Scutellum black, with lateral margins testaceous. Hemelytra hyaline and appears black due to the black dorsal body surface, margins bordering scutellum and hemelytral commissure red. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width and slightly more than four times the anterior width of the vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along the median longitudinal axis the head is three fifths the length of the pronotum. Pronotum with humeral width slightly more than twice the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum long, median length equal to basal width; apex more or less acuminate. Rostral prong (Pl. XLI, fig. 28b) shorter than the third rostral segment; apex acuminate. Stridulatory comb (Pl. XLI, fig. 28c) of approximately eight teeth. Chaetotaxy of the male front leg as shown on Plate XLI. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	90	..
Middle leg	100	81	39	23
Hind leg	100	80	42	(lacking)

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head eight tenths the pronotal humeral width and slightly more than four times the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one third the length of the pronotum. Pronotum with its humeral width slightly more than twice the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	86	37
Middle leg	100	80	40	25
Hind leg	100	82	37	37

Location of types.—Type material, Ethiopia, Cuba, 1934-1935, R. de Meulenaere, in the Royal Museum of Natural History in Brussels, Belgium. One male and one female paratypes (same collection data as above) in the F. H. Snow Entomological Collection.

Comparative notes.—This species is very similar in general ap-

pearance to *Anisops varia* Fieber. However, the synthlipsis is narrower, being about one third the anterior width of the vertex instead of one half as in *A. varia*. Also the head is slightly narrower in this species, only eight tenths the pronotal humeral width instead of nine tenths as found on *A. varia*.

Data on distribution.—Known only from type series.

Anisops varia Fieber

(Pl. XLII, fig. 32)

1851. *Anisops varius* Fieber, Abhand. Kongl. Boh. Gesell. Wiss., vol. V, pt. 7, pp. 483-484.
 1851. *Anisops varius* f. *sugillata*, Fieber, (*loc. cit.*), p. 483.
 1851. *Anisops varius* f. *scutellata*, Fieber, (*loc. cit.*), p. 483.
 1853. *Anisops varius*, Heinrich-Shäffer, Die Wanzenartigen Insecten, vol. IX, p. 10 (list of the species of *Anisops*).
 1888. *Anisops varius*, Horvath, Rev. Ent., vol. VII, p. 189 (= *Notonecta nanula* Walker).
 1899. *Anisops varius*, Kirkaldy, Ann. Soc. Ent. France, vol. LXVIII, p. 106 (= *Anisops perpulcher* Stål).
 1899-1900. *Anisops varia*, Puton, Rev. Ent., vol. LXVIII, p. 80.
 1904. *Anisops varia*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 119, 132.
 1905. *Anisops varius*, Distant, Trans. Linn. Soc. London, vol. XIII, pt. 1, p. 38 (ecological note).
 1910. *Anisops varius*, Distant, Fauna of British India, vol. V, p. 332 (ecological note).
 1922. *Anisops varia*, Lindberg, Notulae Entomologicae, vol. II, p. 47, text fig. 3.
 1926. *Anisops varius*, Esaki, Ann. Mus. Nat. Hungarici, vol. XXIV, p. 188 (ecological note).
 1926. *Anisops varia*, Jaczewski, Ann. Mus. Polonici Hist. Nat., vol. XXIV, p. 188 (ecological note).
 1928. *Anisops varia*, Dover, Treubia, vol. 10, p. 71 (ecological note).
 1929. *Anisops varia*, Hutchinson, Ann. South African Mus., vol. XXV, pp. 393-400, Pl. XXX, fig. 17; Pl. XXXII, fig. 2 (says the *A. perpulcher kalahariensis* Schumacher and *A. perpulcher plumbeus* Schumacher are general forms).
 1929. *Anisops varia varia*, Hutchinson, Ann. South African Mus., vol. XXV, p. 399 (= *A. varia sugillata* Fieber).
 1929. *Anisops varia scutellata*, Hutchinson, Ann. South African Mus., vol. XXV, p. 399 (= *A. perpulcher* Stål).
 1930. *Anisops varia varia*, Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. VI, p. 58 (ecological note).
 1932. *Anisops varia varia*, Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. IV, p. 324 (ecological note).
 1933. *Anisops varia*, Hutchinson, Internat. Revue der ges. Hydrob. Hydrog., vol. 28, pt. 5/6, p. 438 (ecological note).
 1933. *Anisops varia*, Lundblad, Arch. für Hydrob., Suppl. vol. XII, p. 146 (list of Indo-australian and Pacific members of this genus).
 1935. *Anisops varia varia*, Poisson, Mus. Nat. Hist. Nat., vol. III, p. 208 (ecological note).
 1936. *Anisops varia*, Jaczewski, Ann. Zool. Musei Polonici, vol. XI, p. 201 (ecological note).
 1939. *Anisops varia varia*, Poisson, Bull. Soc. Ent. France, vol. 44, p. 42 (ecological note).
 1948. *Anisops varia varia*, Poisson, Inst. Rech. Sahar. Univ. Alger, p. 7 (ecological note).
 1948. *Anisops varia scutellata*, Poisson, (*loc. cit.*), p. 7 (ecological note).

Referring to this species also:

1858. *Anisops perpulcher*, Stål, Ofver. Kongl. Vetensk. Akad. Fordhandl., vol. XX, p. 89.
 1869. *Anisops perpulcher*, Stål, Hemiptera Africana III, p. 192.
 1892. *Anisops perpulcher*, De Carlini, Ann. Mus. Stor. Nat. Genova, Series 2a, vol. XII, (XXXII), p. 11, (ecological note).
 1913. *Anisops perpulcher*, Schumacher, Denksch. der Medic. Ges. Jena, vol. 17, p. 83.
 1913. *Anisops perpulcher plumbeus*, Schumacher, (*loc. cit.*), p. 83 (determined in error).
 1913. *Anisops perpulcher kalahariensis*, Schumacher, (*loc. cit.*) p. 83 (determined in error).

1925. *Anisops perpulcher*, Hesse, Ann. South African Mus., vol. XXII, p. 137 (determined in error).
1929. *Anisops hoggarica*, Poisson, Bull. Soc. Hist. Nat. Afrique du Nord, vol. XX, pp. 89-91, text figs. 4, 5, 6 (determined in error).
1933. *Anisops hoggarica*, Hutchinson, Internat. ges. Hydrob. Hydrog., vol. 28, pt. 5/6, p. 453 (ecological note).
1934. *Anisops hoggarica*, Poisson, Mem. Soc. Hist. Nat. Afrique du Nord, vol. 4, pp. 137-139, text figs. 4, 5, 6 (determined in error).
1939. *Anisops hoggarica*, Poisson, Bull. Soc. Ent. France, vol. 44, p. 43 (ecological note).
1941. *Anisops hoggarica*, Poisson, Rev. Francaise Ent., vol. VIII, p. 77 (ecological note).
1948. *Anisops varia hoggarica*, Poisson, Inst. Recher. Sahar. Univ. d'Alger, p. 6.
1850. *Anisops scutellaris*, Herrich-Schaffer, Die Wanzenartigen Insecten, vol. IX, p. 41, fig. 906.
1896. *Anisops scutellaris*, Matsumara, Trans. Sapporo Nat. Hist. Soc., vol. I, p. 28 (ecological note).
1915. *Anisops scutellaris*, Matsumura, Ent. Mag., Kyoto, vol. I, p. 110 (ecological note).
1915. *Anisops scutellaris*, Esaki, Ent. Mag. Kyoto, vol. I, pp. 31, 81 (ecological note).
1870. *Notonecta nanula*, Walker, The Zoologist (II), vol. V, p. 2381.

Size.—Males, length 6.0 mm.-6.2 mm., greatest body width 1.8 mm.-2.9 mm.; females, length 6.0 mm.-6.6 mm., greatest body width 1.9 mm.-2.1 mm.

Shape.—Subfusiform species; greatest body width about midway the body length.

Color.—General facies dark gray or black. Eyes dark brown. Vertex and pronotum testaceous, the latter may have irregular brown spots. Scutellum dark brown or black, lateral margins may be tinged with red or scutellum may be entirely red. Hemelytra hyaline and appear dark gray or black due to the color of the dorsal body surface; margins bordering scutellum and hemelytral commissure may be tinged with red. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the anterior margin almost straight; anterior margins of eyes extending slightly beyond that of the vertex; greatest width of head nine tenths the pronotal humeral width and six times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is almost one half the length of the pronotum with its humeral width slightly less than twice the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum long; median length equal to its basal width; apex rounded. Rostral prong (Pl. XLII, fig. 32b) shorter than third rostral segment; apex more or less acuminate. Anterior femur with apex more or less curved. Stridulatory comb (Pl. XLII, fig. 32c) of approximately twenty-one teeth. Chaetotaxy

of the male front leg as shown on Plate XLII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	119	75	..
Middle leg	100	82	36	25
Hind leg	100	82	29	31

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head almost nine tenths the pronotal humeral width and five times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior margin of the vertex; along the median longitudinal axis the head is almost one half the length of the pronotum. Pronotum with its humeral width slightly more than twice the median length; lateral margins diverging and slightly more than one half the median length of the pronotum; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	53	33
Middle leg	100	80	36	24
Hind leg	100	80	28	28

Location of types.—Fieber's type material in the Berlin Museum.

Comparative notes.—This species is very similar to *Anisops ares* Hutch. but does not have the long pronotum of this species. In *A. varia* the pronotum is twice the length of the head whereas in *A. ares* the pronotum is three times the length of the head.

Remarks.—This species has a rather wide recorded distribution occurring in Asia as well as in Africa. However, in the vast Pacific and Asiatic material available to me, not one specimen of this species was found. I am of the opinion that this species is composite, with the Asiatic form being another species entirely. There is need of a close examination of the type and the Asiatic forms placed with this species.

Data on distribution:

AFRICA

South Africa, Pine Mission, III-3-1926, one female, gift to H. B. H. fr. G. E. Hutchinson (F. H. Snow Coll.).

South Africa, Blaaukrantz Valley, pools in dried stream bed, IX-3-1926, gift to H. B. H. fr. G. E. Hutchinson, one female (F. H. Snow Coll.).

Egypt, Alexandria, E. de Bergevin, one male, one female (U. S. Nat. Mus.), two females, five males (F. H. Snow Coll.).

Abyssinia, Colonia Erytree, A. Thery, one male (F. H. Snow Coll.).

Mocambique, Vallee du Pungoue, Cuengere, 1906, G. Vasse, four females (Paris Museum).

Afrique, Orient. Angl., Naivasha, 1904, Ch. Alluaud, one female (Paris Museum).

Basin Inf. du Zambeze, Vallee du Nuza, 1905, G. Vasse, one female (Paris Museum).

Sengal, Heudelot, one female (Paris Museum).

Cape-Town, E. Simon, 1898, Noualhier, two females (Paris Museum) one female (F. H. Snow Coll.).

Reg. de Zinder, Maradi (Mission, Tilmo) 1910, Dr. R. Gaillard, two females (Paris Museum).

Tchad, N'Guigmi, 1919, Dr. Noel, one male (Paris Museum).

Soudan, Nioro, 1909, F. de Zeltner, one male (F. H. Snow Coll.).

Sahel Soudanais, Goumbou 1909, F. de Zeltner, one male (Paris Museum).

Belgian Congo, Musoca, IX-1939, H. J. Bredo, one male, one female (Belgium Museum).

Erythraea, Chenda, two females (Bueno Coll. of F. H. Snow Coll.).

SYRIA

Syrien, Kaifa, Reuter, one male, one female (Kirkaldy Coll. of the F. H. Snow Coll.).

Anisops robusta Hutchinson

(Pl. XLI, fig. 30)

1930. *Anisops robusta* Hutchinson, Proc. Zool. Soc. London, vol. XXIX, pp. 446-447, text figs. 3, a, b, c.

1933. *Anisops robusta*, Hutchinson, Internat. ges. Hydrob. Hydrog., vol. 28, pt. 5/6, p. 462 (ecological note).

Size.—Males, length 7.3 mm., greatest body width 2.2 mm.; females, length 7.3 mm., greatest body width 2.4 mm.

Shape.—Robust, subfusiform species; greatest body width midway the body length.

Color.—General facies gray. Eyes gray brown. Hemelytra hyaline and appears dark gray due to the dorsal dark body surface. Legs stramineous. Abdominal venter dark brown with keel and segmental margins stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head equal to the pronotal humeral width and five times the anterior width of the vertex; synthlipsis wide, almost one half the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the length of the pronotum. Pronotum with its humeral width one and two thirds the median length; lateral margins convexly curved and converging, one half the length of the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum long, median length equal to the basal width; apex acuminate. Rostral prong (Pl. XLI, fig.

30b) slightly shorter than third rostral segment; apex acuminate. Fore leg (Pl. XLI, fig. 30a) with dorsal and ventral femoral margins almost parallel, apex rounded; stridulatory comb (Pl. XLI, fig. 30c) of approximately eleven teeth which increase in length from base to apex. Whether or not two apical teeth are missing from my specimen is not clear for Hutchinson (24) figures such a condition in his drawings. Chaetotaxy of the front leg as shown on Plate XLI. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	105	69	..
Middle leg	100	87	41	27
Hind leg	100	87	32	32

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width and four times the anterior width of the vertex; synthlipsis wide, almost one half the anterior width of the vertex; along the median longitudinal axis the head is over one half the length of the pronotum. Pronotum with its humeral width slightly more than twice the median length; lateral margins diverging and almost three fourths the median length, posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	105	48	26
Middle leg	100	84	41	23
Hind leg	100	80	35	35

Location of types.—Type material from Wouranboulchi, Abyssinia, in the British Museum.

Comparative notes.—The peculiar shape of the front femur and the convexly curved, converging lateral margins of the pronotum of the males of this species make it quite unique. *Anisops ares* Hutchinson is perhaps the most similar species, however, the fore femur of the males is not parallel sided for its entire length and the lateral margins of the pronotum are at most subparallel.

Data on distribution:

AFRICA

Abyssinia, Serpent Lake, Wouranboulchi, X-4-1926, J. Omer-Cooper one male, one female, exchange from the British Museum (F. H. Snow Coll.).

Abyssinia, Wouranboulchi nr. Djem-Djem. X-5-1926, J. Omer-Cooper, one male (F. H. Snow Coll.).

Abyssinia, Wouranboulchi, marsh, X-5-1926, J. Omer-Cooper, one female (F. H. Snow Coll.).

Anisops sikoroensis n. sp.

(Pl. XLII, fig. 34; Pl. LVI, fig. 103)

Size.—Males, length, 10.5 mm., greatest body width 3 mm.; females, length 10 mm., greatest body width 3 mm.

Shape.—Large fusiform species, with greatest body width about one third the body length.

Color.—General facies red brown. Abdominal venter darker with keel and segmental margins of the connexivum red brown.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width of the head eight tenths the pronotal humeral width and five to six times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is one half as long as the pronotum. Pronotum with its humeral width twice the median length; lateral margins diverging and almost three fourths the median length; posterior margin convex, medianly emarginate. Facial tubercle with a slight median groove which extends to about midway the length of the frons, apical two thirds of groove bearing a median longitudinal row of long erect hairs. Labrum with basal width one and one fourth the median length; apex rounded. Rostral prong (Pl. LVI, fig. 103) shorter than third rostral segment; apex more or less acuminate. Stridulatory comb (Pl. XLII, fig. 34b) of approximately sixteen even-length teeth. Chaetotaxy of male front leg as shown on Plate XLII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	87	..
Middle leg	100	84	37	20
Hind leg	100	87	36	30

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head eight tenths the pronotal humeral width and six times the anterior width of the vertex; synthlipsis wide, two thirds the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the length of the pronotum. Pronotum with its humeral width slightly more than twice the median length; lateral margins diverging, two thirds the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	50	33
Middle leg	100	81	31	22
Hind leg	100	81	32	26

Location of types.—Male holotype, female allotype, Madagascar, Annanarivo, Sikoro, 1898, Noualhier, in the Paris Museum. One male paratype (same collection data as above) in the F. H. Snow Collection.

Comparative notes.—Very similar in general appearance to *A. grandis* Poisson, however, the latter lacks the groove on the frons and the median frontal row of erect hairs as found on the males of this species.

Data on distribution.—Known only from type series.

Anisops fijiensis n. sp.

(Pl. XL, fig. 24)

Size.—Males, length 4.6 mm.-4.9 mm., greatest body width 1.2 mm.-1.4 mm.; females, length 4.9 mm.-5.4 mm., greatest body width 1.3 mm.-1.5 mm.

Shape.—Small fusiform species, greatest body width about mid-way the body length.

Color.—General facies dark gray. Eyes brown. Vertex and pronotum testaceous or stramineous, the latter may be hyaline on its posterior margin and appear the color of the underlying scutellum. Scutellum black, orange, or black with orange or testaceous apex. Hemelytra hyaline and appear dark gray as it overlies the black dorsal body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest head width nine tenths the pronotal humeral width, six to seven times the anterior width of the vertex; synthipsis wide, approximately one half the anterior width of the vertex; along the median longitudinal axis the head is three fourths the pronotal length. Pronotum with its humeral width twice its median length; lateral margins diverging and almost one half the median length; posterior margin convex, medianly emarginate. Facial tubercle laterally compressed forming a slight carina which runs anteriorly to apex of frons. Labrum short; basal width one and three fourths its median length; apex rounded. Rostral prong (Pl. XL, fig. 24b) as long as third rostral segment; apex acuminate. Stridulatory comb (Pl. XL, fig. 24c) of approximately twenty teeth which gradually decrease in length from base to apex; apical tooth almost one half the length of the basal tooth. Chaetotaxy of the male front leg as shown on Plate XL. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	84	..
Middle leg	100	80	37	26
Hind leg	100	82	30	31

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest head width nine tenths the pronotal humeral width, six times the anterior width of the vertex, synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the pronotal length. Pronotum with humeral width slightly more than twice the median length; lateral margins diverging and almost one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	128	55	36
Middle leg	100	80	36	27
Hind leg	100	82	31	31

Location of types.—Male holotype, female allotype, five male and six female paratypes, Fiji Islands, Taveuni, in shallow fresh water swamp above high tide, VIII-1934, R. W. Paine in the Snow Entomological Collection. Other paratypes are as follows. In the Snow Entomological Collection: four males, three females, Fiji Islands, Taveuni, from shallow muddy pool in coconut plantation, VIII-1934, R. W. Paine; three males, two females, Fiji Islands, IV-19-39, R. A. Lever.

Comparative notes.—Though somewhat smaller, this species by its carinate frons and coloration resembles *Anisops tahitiensis* Lundblad. *Anisops fijiensis*, however, lacks the enlarged truncate apex of the male front femur as found on *A. tahitiensis* Lundblad.

Data on distribution.—Known only from type series.

Anisops adonis Hutchinson

(Pl. XLI, fig. 29)

1928. *Anisops adonis* Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. I, pp. 157-159, text fig. 2.

1933. *Anisops adonis*, Hutchinson, Internat. Rev. ges. Hydrob. Hydrog., vol. 28, pt. 5/6, p. 462 (ecological note).

Size.—Males, length 5.2 mm.-5.5 mm., greatest body width 1.5 mm.-1.6 mm.; females, length 5.1 mm.-5.4 mm., greatest body width 1.5 mm.-1.8 mm.

Shape.—Small fusiform species; greatest body width about midway the body length.

Color.—*Brown form:* General facies stramineous. Eyes brown. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous. *Dark form:* General facies dark brown or black. Eyes dark brown. Vertex and pronotum stramineous. Scutellum dark brown or black. Hemelytra hyaline, appear black due to the underlying black dorsal body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head eight tenths the pronotal humeral width and six times the anterior width of the vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along the median longitudinal axis the head is three fourths the length of the pronotum. Pronotum with its humeral width two and one half times the median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. Facial tubercle laterally compressed with a faint median carina that extends anteriorly on the frons. Rostral prong (Pl. XLI, fig. 29b) shorter than the third rostral segment; apex more or less rounded. Labrum long with its median length equal to its basal width; apex rounded; provided with a few long scattered hairs. Stridulatory comb (Pl. XLI, fig. 29c) of approximately seven, even-length, short, cylindrical teeth. Chaetotaxy of the front leg as shown on Plate XLI. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	128	83	..
Middle leg	100	88	44	29
Hind leg	100	82	37	34

Female structural characteristics.—Viewed from above, the outline of the head is rounded with its greatest width eight tenths the pronotal humeral width and four and one half times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is two thirds the length of the pronotum. Pronotum with its humeral width almost two and one half times the median length; lateral margins diverging and three fourths the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	67	50
Middle leg	100	85	40	27
Hind leg	100	82	36	33

Location of types.—Male type and female allotype, N. Nigeria, Zungeru, in the British Museum.

Comparative notes.—This species appears closely allied to *A. jaczewski* Hutchinson, both have a laterally compressed frons and similar chaetotaxies on the male front legs. However, the males of the latter have a short front tarsus, only about one half the length of the fore tibiae and a narrower synthlipsis, about one third the anterior width of the vertex, whereas in the case of *A. adonis* the males have the front tarsi two thirds the length of the tibiae and the synthlipsis is two thirds the anterior width of the vertex.

Data on distribution:

AFRICA

Soudan, Rock pool, R. Yei Equatoria, Dec. 11, 1937, J. G. Myers, four males, four females (F. H. Snow Coll.); eleven males, twenty-seven females (British Nat. Hist. Museum).

Nigeria, Olokemiji, J. C. Birdwell, two males, six females (U. S. Nat. Mus.).
Nigeria, Olokemiji, Iboda, one male (U. S. Nat. Mus.).

Anisops jaczewski Hutchinson

(Pl. XL, fig. 25)

1928. *Anisops jaczewski* Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. I, p. 304.

1929. *Anisops jaczewski*, Hutchinson, Ann. South African Mus., vol. XXV, pt. 3, pp. 403-404, Pl. XXX, fig. 18; Pl. XXXII, figs. 5, 8.

1939. *Anisops jaczewski*, Poisson, Bull. Soc. Ent. France, vol. 44, p. 43 (ecological note).

Referring to this species also:

1926. *Anisops vitrea*, Horvath, Arch. für Zool., vol. 18A, no. 31, p. 2 (determined in error, actually *A. jaczewski* Hutchinson).

1926. *Anisops vitrea*, Jacewski, Analibus Zoologicis Musei Polonici Historiae Naturalis, vol. V, p. 86, text figs. 42, 43, 44 (determined in error; actually *A. jaczewski* Hutchinson).

Size.—Males, length 4.5 mm.-4.7 mm., greatest body width 1.2 mm.; females, length 4.8 mm., greatest body width 1.4 mm.

Shape.—Small subfusiform species; lateral margins in anterior half of body almost parallel, lateral margins of posterior half strongly converging.

Color.—General facies gray. Eyes brown. Vertex, pronotum, and scutellum testaceous. Hemelytra hyaline and appears dark gray due to color of the dorsal body surface. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head eight tenths the pronotal humeral width and six times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is three fourth the pronotal length. Pronotum with its humeral width twice its median

length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. Facial tubercle laterally compressed forming a median carina which runs forward on the frons. Labrum short, basal width one and one third the median length; apex rounded. Rostral prong (Pl. XL, fig. 25b) shorter than the third rostral segment; apex more or less acuminate. Stridulatory comb (Pl. XL, fig. 25c) of approximately ten teeth which increase slightly in height from base to apex. Chaetotaxy of the male front leg as shown on Plate XL. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	110	60	..
Middle leg	100	86	36	28
Hind leg	100	76	32	30

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head eight tenths the pronotal humeral width and four and one half times the anterior width of the vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the length of the pronotum. Pronotum with its humeral width twice the median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	46	30
Middle leg	100	78	33	28
Hind leg	100	82	31	29

Location of types.—Type material from Transvaal, Africa in the British Museum.

Comparative notes.—This species is closely related to *A. adonis* Hutch. However the male front tarsus is shorter than in the case of the latter, being slightly more than one half the length of the fore tibia whereas the fore tarsus of *A. adonis* is fully two thirds the length of the fore tibia. Also the teeth of the stridulatory comb of *A. adonis* do not overlap one another as in the case of *A. jaczewski* but are distinct and separate from one another.

Data on distribution:

AFRICA

Transvaal, Main Drift, Limpopo R. Messina, V-29-1927, one male, gift to H. B. H. fr. G. E. Hutchinson (F. H. Snow Coll.).

Khami River below Niur, VI-27-1921, one female, gift to H. B. H. fr. G. E. Hutchinson (F. H. Snow Coll.).

Sudan Africa, Rock pool, R. Yei Equatoria, Dec. 11, 1937, J. G. Myers, four males, four females (F. H. Snow Coll.) eight males, fourteen females (Brit. Mus.).

Basin du Chari, Rievère Gribanji, Mission Chari-Tchad, Jan. 1904, DeCorse, two males, one female (Paris Museum).

Cameron, 1920, Dr. Noel, one female, one male (Paris Museum).

Moyen Chari, Fort Archambault, Mission Chari-Tchad, I-1904, Dr. J. DeCorse, one male, one female (Paris Museum).

Rahr-al-Chazal, Souch-Nassili, 1912, Dr. R. Gaillard, one male, one female (Paris Museum).

Portuguese East Africa, C. W. Howard, two males (U. S. Nat. Mus.).

Anisops semita n. sp.

(Pl. XLII, fig. 33)

Size.—Males, length 4.2 mm.-4.5 mm., greatest body width 1.1 mm.-1.2 mm.; females, length 4.1 mm.-4.5 mm., greatest body width 1.1 mm.-1.2 mm.

Shape.—Small, fusiform species; greatest body width about mid-way its body length.

Color.—General facies stramineous. Eyes brown. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal width, slightly more than five times the anterior width of the vertex; synthlipsis wide, almost one half the anterior width of the vertex; along the median longitudinal axis the head is slightly more than two thirds the length of the pronotum. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and approximately one half the median length of the pronotum; posterior margin convex, medianly emarginate. Facial tubercle with a longitudinal depression forming two lateral ridges which bear long erect hairs. These two rows of hairs continue down the lateral margins of the labrum to the apex of the rostrum. Labrum broad; basal width twice its median length; apex rounded. Rostral prong (Pl. XLII, fig. 33b) as long as the third rostral segment; apex acuminate. Stridulatory comb (Pl. XLII, fig. 33c) of approximately nine teeth, the basal four twice the length of the apical five. Chaetotaxy of the male front leg as shown on Plate XLII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	76	..
Middle leg	100	95	37	25
Hind leg	100	78	30	30

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest head width nine tenths the pronotal humeral width, four to five times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the length of the pronotum. Pronotum with its humeral width twice its median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	121	52	28
Middle leg	100	78	45	26
Hind leg	100	77	32	31

Location of types.—Male holotype, Australia, N. Queensland, Barren River nr. Barren Waters, IX-28-38, R. G. Wind, in the Snow Entomological Collection. Female allotype, three male and ten female paratypes, Queensland, Coen C. York, May, '32, Harv. Austral. Exped., Darlington, in the Harvard Museum of Comparative Zoology. Other paratypes are as follows: One male, two females, Queensland, Coen C. York, May, '32, Harv. Austral. Exped., Darlington, in the Snow Entomological Collection.

Comparative notes.—This species is closely related to *Anisops canaliculata* n. sp. and can only be distinguished from it on the basis of the males which have the two rows of erect hairs which extend from the ridges of the facial tubercle to the fourth rostral segment.

Data on distribution.—Known only from type series.

Anisops canaliculata n. sp.

(Pl. XLIII, fig. 35)

Size.—Males, length 4.5 mm.-4.6 mm., greatest body width 1.3 mm.-1.4 mm.; females, length 4.9 mm.-5.4 mm., greatest body width 1.3 mm.-1.4 mm.

Shape.—Small species, only slightly fusiform; lateral margins in anterior half of body subparallel, only slightly converging, converging in posterior half of body.

Color.—General facies testaceous. Eyes brown. Pronotum and scutellum may be irregularly tinged with orange. Scutellum may have two triangular black patches, one on each side of the anterior half, projecting back from the posterior pronotal margin. Legs testaceous. Abdominal venter black with keel and segmental margins of the connexivum testaceous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with its greatest width nine tenths the pronotal humeral width and at least four times the anterior width of the vertex; synthlipsis wide, at least one third the anterior width of the vertex; along the median longitudinal axis the head is at least one half as long as the pronotum. Pronotum with its humeral width at least twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle with a median longitudinal groove. Labrum short; basal width one and one half times its median length, apex rounded; faint median depression extending from base to apex. Rostral prong (Pl. XLIII, fig. 35b) slightly shorter than third rostral segment and with apex acuminate. Stridulatory comb of approximately ten teeth with basal five twice as long as apical five. Chaetotaxy of the male front leg as shown on Plate XLIII, fig. 35a. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	127	61	..
Middle leg	100	80	36	24
Hind leg	100	82	33	35

Female structural characteristics.—Viewed from above, the outline of the head is rounded with its greatest width nine tenths the pronotal humeral width and at least four times the anterior width of the vertex; synthlipsis wide, slightly less than one half the anterior width of the vertex; along the median longitudinal axis the head is three fifths the length of the pronotum. Pronotum with its humeral width twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	127	52	35
Middle leg	100	75	36	26
Hind leg	100	75	30	32

Location of types.—Male holotype, female allotype, three male and seven female paratypes, N. Queensland, Barren River nr. Barren Waters, 9-28-38, R. G. Wind in the Snow Entomological Collection. Other paratypes are as follows: In the Harvard Museum of Comparative Zoology: one male, six females, Queensland, Australia, Townsville, Mar. '32, Harv. Austr. Exped., Darlington.

Comparative notes.—Its small size, wide synthlipsis, and depressed facial tubercle are strongly suggestive of *A. nivea* (Fabri-

cuis). However, the males of the two species serve to distinguish them quite readily. The males of *A. canaliculata* lack the three tufts of labral hairs and the peculiarly curved tarsal claws of the middle leg as found on *A. nivea*. For comparison of the chaetotaxies of the male front legs see Pl. XLIII, fig. 35a and Pl. XLIII, fig. 39a.

Data on distribution:

AUSTRALIA

New Queensland, Townsville, 1920, G. F. Hill, five males, six females (Bueno Coll. of F. H. Snow Coll.).

Anisops psyche Hutchinson

(Pl. XLIII; fig. 38)

1923. *Anisops psyche* Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. 1, pp. 159-160, text fig. 3.

1929. *Anisops psyche*, Hutchinson, Ann. South African Mus., vol. XXV, pp. 400-402, Pl. XXX, fig. 20; Pl. XXXII, fig. 3.

1930. *Anisops psyche*, Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. VI, p. 58 (ecological note).

1930. *Anisops psyche*, Hutchinson, Proc. Zool. Soc. London, vol. XXIX, pt. 2, pp. 449-450 (ecological note).

1932. *Anisops psyche*, Hutchinson, Proc. Zool. Soc. London, vol. XXXI, pt. 1, p. 125 (ecological note).

1934. *Anisops psyche*, Poisson, Mus. Nat. Hist. Natur., vol. III, p. 211 (ecological note).

Size.—Males, length 5.7 mm., greatest body width 1.5 mm.; females, length 5.7 mm., greatest body width 1.5 mm.

Shape.—Small, fusiform species; greatest body width midway the body length.

Color.—General facies brown. Eyes brown. Vertex and pronotum testaceous, the latter may be hyaline and appear the color of the scutellum. Scutellum orange or testaceous. Hemelytra hyaline and appear the brown color of the underlying scutellum. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the anterior margin almost straight; greatest width of the head eight tenths the pronotal humeral width and almost five times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is almost one half the length of the pronotum. Pronotum with its humeral width twice the median length; lateral margins diverging and three fifths the median length; posterior margin convex, medianly emarginate. Facial tubercle excavate with lateral margins carinate. Labrum short, basal width twice the median length; apex rounded. Rostral prong (Pl. XLIII, fig.

38b) shorter than the third rostral segment; apex acuminate. Stridulatory comb (Pl. XLIII, fig. 38c) of approximately eight even-length teeth. Keel of second abdominal segment laterally expanded and triangularly excavate; lateral margins carinate and bearing long erect hairs; excavation lined with short, procumbent hairs. Connexivum of the third abdominal segment with a row of nodules on its ventral surface which becomes progressively smaller toward the apex, nodules continued onto the connexivum of the fourth abdominal segment. Chaetotaxy of the front leg as shown on Plate XLIII. The relative lengths of the parts of the legs are as follows: *

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120
Middle leg	100	82	36	28
Hind leg	100	83	36	36

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width and five times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is at least one half the length of the pronotum. Pronotum with its humeral width almost three times the median length; lateral margins diverging and slightly more than one third the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	122	55	35
Middle leg	100	82	36	28
Hind leg	100	83	34	34

Location of types.—Type material from Kampala, Uganda in the British Museum.

Comparative notes.—Very closely allied to *Anisops hancocki* Hutchinson from which it differs by the males not having the fore femur greatly enlarged dorso-ventrally just before the base. For comparison of the chaetotaxies of the front legs of the males see Plate XLIII, fig. 38a and Plate XLVI, fig. 52a.

Data on distribution:

AFRICA

Kueni River, VI-27-1927, one male, gift to H. B. H. fr. G. E. Hutchinson (F. H. Snow Coll.).

Salisbury, Makahiri River, VII-3-1927, one female, gift to H. B. H. fr. G. E. Hutchinson (F. H. Snow Coll.).

* Tarsi of single male specimen lacking.

Anisops genji Hutchinson

(Pl. XLIII, fig. 36)

1927. *Anisops genji*, Hutchinson, Ann. Mag. Nat. Hist., Ser. 9, vol. XIX, pp. 377-378, text fig. 2.

1929. *Anisops genji*, Hutchinson, Ann. South African Mus., vol. XXV, p. 383, Pl. XXX, fig. 5.

1933. *Anisops genji*, Lundblad, Arch. für Hydrob., Suppl. vol. XII, p. 145 (a list of Indo-australian and Pacific forms of this genus).

1933. *Anisops genji*, Lundblad, Sartryck ur Entomogolisk Tidskrift Haft. 3-4, pp. 265-267, text figures 8, A, B, C, D, E, F, G, & Pl. 15 lower right fig.

1941. *Anisops genji*, Hoffmann, Lingnan Sci. Jour., vol. XX, p. 59 (catalogue).

Referring to this species also:

1896. *Anisops scutellaris*, (nec Herrich-Shaffer) Uhler, Proc. U. S. Nat. Mus., Vol. VII, p. 275 (believed by Hutchinson to be *Anisops genji*).

1928. *Anisops feberi*, Jaczewski, Ann. Mus. Zool. Polonici, vol. VII, p. 113, Pl. XVI, figs. 18, 19, 20, 21 (his drawings are of *Anisops genji* Hutch. and not of *Anisops nasuta* Fieb. (*A. feberi* Kirk.)).

Size.—Males, length 5.8 mm.-6.6 mm., greatest body width 1.6 mm.-1.8 mm.; females, length 6.1 mm.-6.6 mm., greatest body width 1.6 mm.-1.8 mm.

Shape.—Fusiform species; greatest body width about one third its length.

Color.—Eyes gray or brown. Vertex and pronotum testaceous, the latter may be hyaline on its posterior margin and appear the color of the underlying scutellum. Scutellum testaceous, black, or black with its apex testaceous or orange. Hemelytra hyaline and appear the underlying color of the dorsal body surface which may be black, or testaceous with the apical abdominal segments alternating brown and black. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous or brown.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the vertex extending slightly beyond the anterior margins of the eyes; greatest width of the head nine tenths the pronotal humeral width and four to five times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half as long as the pronotum. Pronotum with its humeral width almost twice its median length; lateral margins diverging and almost one half the median length; posterior margin convex, medianly emarginate. Frons triangularly excavate, bordered on each side by two carinae, the outer of which meet apically to form an acuminate apex. Anterior interocular space with a median carina which meets the acuminate apex of the frons. Labrum short; basal width one and two thirds its median length; apex acuminate;

each basal angle of the labrum bears a long tuft of hairs which curve anteriorly along the outer carinae of the frons. Rostral prong (Pl. XLIII, fig. 36b) slightly shorter than the third rostral segment; apex acuminate. Stridulatory comb (Pl. XLIII, fig. 36c) of approximately thirteen even-length teeth. Chaetotaxy of the male front leg as shown on Plate XLIII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	103	64	..
Middle leg	100	81	42	22
Hind leg	100	85	36	36

Female structural characteristics.—Viewed from above, the outline of the head is rounded with the anterior margin of the vertex extending slightly beyond that of the eyes; greatest width of the head nine tenths the pronotal humeral width and five to six times the anterior width of the vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the length of the pronotum. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and over one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	114	57	33
Middle leg	100	83	42	25
Hind leg	100	81	35	35

Location of types.—Male type, two male and one female paratypes, "Japan" in the collection of G. E. Hancock.

Comparative notes.—The excavate facial tubercle, labral hairs, and the curved middle tarsal claws of the males strongly relate this species to *A. nivea* (Fabricius). However, the excavation of *A. genji* extends the length of the frons whereas on *A. nivea* it is restricted to the facial tubercle. Also the excavation of the latter species is bordered on each side by only one carina whereas in *A. genji* it is bordered on each side by two carinae. In addition, the median tuft of labral hairs as found on *A. nivea* is lacking in this species.

Data on distribution:

JAPAN

Shimbara Peninsula, Unzen, 2200', Sept. 4, 1937, E. Suenson, eighteen males, fifty-six females (F. H. Snow Coll.).

Kobe, Baker, two males, nine females (U. S. Nat. Mus.).

CHINA

- Soochow, fr. N. Gist. Gee, five males, ten females (F. H. Snow Coll.).
 Shanghai, E. Suenson, one female (F. H. Snow Coll.).
 Peking, X-13-25, P. W. Claassen, Tsing Huo Col., twenty-one males, twenty-two females (F. H. Snow Coll.).
 Peking, X-13-24, P. W. Claassen, Tsing Huo Col., eight males, six females (F. H. Snow Coll.).
 Peking, X-15-24, P. W. Claassen, Tsing Huo Col., three males, three females (F. H. Snow Coll.).
 Peking, XI-10-24, P. W. Claassen, Tsing Huo Col., three males, ten females (F. H. Snow Coll.).
 Manchuria, Yablonya St., VII-20-1940, via Weyman, one male, one female (F. H. Snow Coll.).
 Manchuria, Dairen, X-8-40, Michael Weyman, two males (F. H. Snow Coll.).
 Shanghai, Aug. 20, 1939, via Weyman, one male, one female (F. H. Snow Coll.).
 Manchuria, X-15-38, M. J. Nikitin, one male (F. H. Snow Coll.).
 Soochow, Chenfu F. Wu, one male (F. H. Snow Coll.).
 Peking, Chenfu F. Wu, two females (F. H. Snow Coll.).
 Foochow, Chenfu F. Wu, one female (F. H. Snow Coll.).
 Hangchow, Chenfu F. Wu, one female (F. H. Snow Coll.).
 Szechwan, Chenfu F. Wu, one male (F. H. Snow Coll.).
 Suifu Szechwan, D. C. Graham, twelve males, thirteen females (F. H. Snow Coll.).

Anisops nivea (Fabricius)

(Pl. XLIII, fig. 39; Pl. LIV, fig. 93)

1775. *Notonecta nivea* Fabricius, Systema Entomologiae. Flenburgi et hipsiae, p. 690.
 1794. *Notonecta nivea*, Fabricius, Entomologia Systema, vol. IV, p. 58.
 1803. *Notonecta nivea*, Fabricius, Systema Rhyngatorum, p. 103 (list of species of *Notonecta*).
 1840. *Anisops nivea*, Spinola, Essais sur les Insectes Hemipteres Rhyngotes ou Heteropteres, p. 58 (determined in error, actually *A. sardea* Herrich-Shaffer).
 1840. *Anisops nivea*, Rambur, Faune entomologique de l'Andalousie, vol. II, p. 191 (determined in error, actually *A. sardea* Herrich-Shaffer).
 1847. *Anisops nivea*, Costa, Atti del Reale Instituto L'Incoraggiamento Alle Scienze Naturali di Napoli, vol. VII, p. 148 (determined in error, actually *A. sardea* Herrich-Shaffer).
 1848. *Anisops niveus*, Amyot, Entomologie Franciase, Rhynchotas, p. 338 (determined in error, actually *A. sardea* Herrich-Shaffer).
 1851. *Anisops niveus*, Fieber, Abhandl. Konigl. bohm. Ges. Wiss., vol. 7, p. 484 (determined as *A. niveus* though in parenthesis he named it *A. nasuta*).
 1899. *Anisops niveus*, Kirkaldy, Ann. Soc. Ent. France, vol. LXVIII, p. 105 (determined in error, probably *A. pellucens* Gerst.).
 1901. *Anisops niveus*, Kirkaldy, The Entomologist, vol. XXXIV, p. 5 (determined in error).
 1904. *Anisops niveus*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 118-119, 132 (determined in error, probably *A. pellucens* Gerst.).
 1905. *Anisops nivea*, Matsumura, Trans. Sapporo Nat. Hist. Soc., vol. I, p. 28 (determined in error, actually *A. nasuta* Fieber).
 1906. *Anisops niveus*, Distant, Fauna of British India, Rhynchota, vol. III, p. 46 (determined in error).
 1908. *Anisops nivea*, Kirkaldy, Y. sjostedt: Wissenschaften Ergebn. der schwed. zool. Exped. Hemiptera. XII, p. 24 (determined in error, probably *A. pellucens* Gerst.).

1915. *Anisops niveus*, Esaki, Ent. Mag., Kyoto, vol. I, p. 31 (determined in error, actually *A. nasuta* Fieber).
1915. *Anisops niveus*, Matsumura, Ent. Mag., Kyoto, vol. I, p. 110.
1918. *Anisops niveus*, Paiva, Rec. Ind. Mus., vol. XIV, p. 27 (ecological note).
1919. *Anisops niveus*, Paiva, Rec. Ind. Mus., vol. XV, p. 13 (ecological note).
1926. *Anisops niveus*, Esaki, Ann. Mus. Nat. Hungarici, vol. XXIV, p. 187 (determined in error).
1927. *Anisops niveus*, Dover, Jour. Bombay Nat. Hist. Soc., vol. XXXII, p. 615.
1927. *Anisops niveus*, Torre Bueno, Bull. Brooklyn Ent. Soc., vol. XXII, p. 30 (determination questionable).
1928. *Anisops nivea*, Esaki, Insects of Samoa II, p. 76 (mentioned in footnote the correct location of type).
1929. *Anisops niveus*, Hutchinson, Ann. South African Mus., vol. XXV, p. 385 (mentions the need of a closer study of the type, as the species seems to be composite).
1929. *Anisops niveus*, Poisson, Faune des Colonies Francaises, vol. III, p. 154 (determined in error, actually *A. pellucens* Gerst).
1933. *Anisops niveus*, Hoffmann, Lingnan Sci. Jour., vol. XII, pp. 255-256 (catalogue; of little value for at least two species are mixed).
1933. *Anisops niveus*, Wu, Lingnan Sci. Jour., vol. XII, pp. 213-214 (catalogue; of little value for at least two species are mixed).
1933. *Anisops niveus*, Lundblad, Arch. für Hydrob., Suppl. vol. XII, pp. 145, 163-166, text fig. 56.
1935. *Anisops niveus*, Wu, Catalogus Insectorum Sinensium, vol. II, p. 576.
1941. *Anisops niveus*, Hoffmann, Lingnan Sci. Jour., vol. XX, pp. 60-61 (catalogue; this species omitted as it is composite; therefore distribution questionable).

Size.—Males, length 4.8 mm.-5.1 mm., greatest body width 1.2 mm.-1.4 mm.; females, length 4.8 mm.-5.4 mm., greatest body width 1.3 mm.-1.8 mm.

Shape.—Fusiform species, greatest body width about one half the length of the body.

Color.—General facies pearlaceous. Eyes brown. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width of the head nine tenths the pronotal humeral width and four to five times the anterior width of the vertex; synthlipsis wide, approximately one third the anterior width of the vertex; along the median longitudinal axis the head is seven eighths the length of the pronotum. Pronotum with its humeral width slightly more than twice the median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. Facial tubercle with a triangular excavation bordered on each side by a raised carina. Labrum broad and short; basal width almost twice its median length; apex more or less acuminate; base with a transverse row of long hairs with the outer one on each side grouped together to form a tuft which curves anteriorly on the excavate facial tubercle, the inner group erect. Rostral prong (Pl. LIX, fig.

93) longer than the third rostral segment; apex acuminate. Stridulatory comb (Pl. XLIII, fig. 39b) of approximately fifteen even length teeth. Middle tarsal claws strongly curved inward at base; posterior claw thicker than anterior one. Chaetotaxy of the front leg as shown on Plate XLIII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	102	79	..
Middle leg	100	85	40	25
Hind leg	100	78	33	33

Female structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width of the head eight to nine tenths the pronotal humeral width and four to five times the anterior width of the vertex; synthlipsis wide, almost one half the anterior width of the vertex; along the median longitudinal axis the head is three fifths the length of the pronotum. Pronotum with its humeral width slightly more than its median length; lateral margins diverging and six tenths the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	116	60	33
Middle leg	100	79	38	22
Hind leg	100	83	33	33

Location of types.—Fabricius' type material from India located in the Keil Museum.

Comparative notes.—This species is closely related to *A. genji* Hutch., but may be readily separated from it on the basis of the males. The males of *A. nivea* have the excavation restricted to the facial tubercle whereas in *A. genji* the excavation extends almost the full length of the frons. The excavation is bordered by one carina on each side in the former species whereas in the latter the excavation is bordered by two carinae on each side.

Bibliographical notes.—Kirkaldy in 1904 (30) as a result of a study of the type of *Anisops ciliata* Stål and what he erroneously believed to be the type of *A. niveus* (Fabricius) declared the two to be the same and placed several other species into synonymy therewith. It has since been shown by Lundblad (32) that what Kirkaldy thought was the type of *A. nivea* was not the type at all. Many of the references that Kirkaldy placed with *A. nivea* I have been able to place with their correct species, others defy determination due to poor or no accompanying description.

Notonecta ciliata Fabricius which both Stål and Kirkaldy felt was an Anisops, is actually an Enithares. However, *Anisops ciliata* Stål from the Ile de France is a valid Anisops species. *Anisops hyalinus* Fieber was first placed as a possible synonym of *A. ciliata* by Stål and later by Kirkaldy as a possible variety of *A. ciliata* only ever, it is much too large for *A. nivea*, and resembles *A. ciliata* only in size. I have found no species in my vast Asiatic material which fits the description of *A. hyalinus*, so I shall present a translation of the original description. Though highly inadequate, it is the only description of the species.

Data on distribution:

SUMATRA

Sumatra, Thienemanni, one male (gift from Lundblad) (F. H. Snow Coll.)

INDIA

Ganjam Dist., Barkuda, Chilka Lake, Madras Pres., VIII-18, F. H. Gravely, fifteen males, fifteen females (F. H. Snow Coll.); seventeen males, nine females (Indian Museum).

Ganjam Dist., Barkuda, Chilka Lake, Madras Pres., XI-23-19, N. A., eight males, twenty females (Indian Museum).

Ganjam Dist., Barkuda, Chilka Lake, Madras, N. A., one female (Indian Museum).

Ganjam Dist., Rambha, Madras, IX-20-13, Annandale, one male, seventeen females (Indian Museum), four males, three females (F. H. Snow Coll.).

Madras, Barkuda Id., Chilka Lake, VIII-4-7, one male, one female (Bueno Coll. of F. H. Snow Coll.).

Br. India, Coimbatore, L. V. Newton S. J. one male, one female (Bueno Coll. of F. H. Snow Coll.).

Anisops tahitiensis Lundblad

(Pl. XLIII, fig. 40)

1934. *Anisops tahitiensis* Lundblad, Bull. Bernice Pauki Bishop Mus. Poly. Ethn. Nat. Hist., vol. 113, pp. 121-123, text figs. 1-5.

Size.—Males, length 5.1 mm.-5.5 mm., greatest body width 1.3 mm.-1.5 mm.; females, length 5.1 mm.-5.5 mm., greatest body width 1.3 mm.-1.5 mm.

Shape.—Slightly fusiform species; greatest body width almost midway the body length.

Color.—*Gray form*: General facies peralaceous. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous. *Brown form*: Eyes brown. Vertex and pronotum testaceous, the latter may be hyaline on its posterior margin and appear dark brown or black due to the underlying color of the scutellum. Scutellum testaceous or dark brown

with its lateral margins orange. Hemelytra hyaline and appear stramineous or dark brown depending on the color of the dorsal body surface. Legs stramineous. Abdominal venter dark brown or black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the anterior margin almost straight; greatest width of the head nine tenths of the pronotal humeral width and seven times the anterior width of the vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along the median longitudinal axis the head is slightly more than three fourths the length of the pronotum. Pronotum with its humeral width approximately twice its median length; lateral margins diverging and from one half to three fifths the median length; posterior margin convex, medianly emarginate. Facial tubercle laterally compressed to form a median carina which proceeds anteriorly for the basal two thirds of the frons. Labrum with basal width one and one half times its median length; apex rounded. Rostral prong (Pl. XLIII, fig. 40b) longer than the third rostral segment; apex acuminate. Labrum with its basal width one and one half its median length. Stridulatory comb (Pl. XLIII, fig. 40c) of approximately twenty-one teeth. Chaetotaxy of the male front leg as shown on Plate XLIII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	111	77	..
Middle leg	100	84	77	27
Hind leg	100	81	30	31

Female structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width of the head nine tenths the pronotal humeral width and five and one half times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is three fifths as long as the pronotum; lateral margins diverging and one half as long as the pronotum; posterior margin convex, medianly emarginate. The relative lengths of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	115	50	34
Middle leg	100	77	36	25
Hind leg	100	87	31	32

Location of types.—Lundblad's type material, Tahiti, July 20, 1925, L. E. Cheesman, is in the British Museum.

Comparative notes.—This species is about the same size and general appearance as *Anisops cleopatra* Distant from which it can be separated on the basis of the males. The males of *A. cleopatra* lack the carinate frons and the rounded apex of the anterior femur. Also the head of the males of *A. tahitiensis* is much larger, the eyes being more voluminous, and almost straight on its anterior margin whereas the head of *A. cleopatra* has a curved anterior margin and the eyes are not voluminous.

Data on distribution:

GUADALCANAL

Jan., 1945, P. H. Eschmeier, four males, eight females (F. H. Snow Coll.).
1944, L. J. Lipovsky, twenty-three males, twenty-seven females (F. H. Snow Coll.).

NEW GUINEA

Rigo, 1889, L. Loria, two males, one female (F. H. Snow Coll.).

ANDAMAN ISLANDS

nr. W. Coast Isl., III-1914, C. J. Rogers, five males, eight females (Indian Museum).

NEW HEBRIDES

March 15, 1943, Oman, two males, four females (U. S. Nat. Mus.).

PHILIPPINE ISLANDS

Mindanao, Davao, Baker, two males, one female (U. S. Nat. Mus.).

OKINAWA

Sept. 18, 1945, W. D. Fields, six males, eight females (U. S. Nat. Mus.).

Anisops tasmaniaensis n. sp.

(Pl. XLVII, fig. 58)

Size.—Males, length 7.5 mm.-7.9 mm., greatest body width 2.4 mm.-2.5 mm.; females, length 7.8 mm.-7.9 mm., greatest body width 2.1 mm.-2.3 mm.

Shape.—Moderately large species; fusiform, with greatest body width midway the body length.

Color.—General facies stramineous. Eyes brown. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum brown.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head equal to pronotal humeral width, slightly more than seven times the anterior width of the vertex; synthlipsis wide, three fourths the anterior width of the vertex; along the median longitudinal axis the head is almost three fourths the pronotal length. Pronotum with its humeral width twice its median length; lateral margins diverging and slightly more

than one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum long, medianly length equal to its basal width; apex rounded. Rostral prong (Pl. XLVII, fig. 58b) slightly shorter than third rostral segment; apex acuminate. Stridulatory comb (Pl. XLVII, fig. 58c) of approximately twenty-two teeth; basal five slightly shorter than the others. Chaetotaxy of front leg as shown on Plate XLVII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	127	83	..
Middle leg	100	83	41	24
Hind leg	100	80	32	32

Female structural characteristics.—Viewed from above, the outline of the head is rounded, with the vertex extending slightly beyond the anterior margins of the eyes; greatest width of the head nine tenths the pronotal humeral width, five times the anterior width of the vertex; synthlipsis wide, two thirds the anterior width of the vertex; along the median longitudinal axis the head is almost three fourths the pronotal length. Pronotum with its humeral width twice the median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	126	58	32
Middle leg	100	76	42	21
Hind leg	100	81	34	32

Location of types.—Male holotype, female allotype, two male and one female paratypes, Tasmania, Lake Leake, XI-1937, J. W. Evans, in the Snow Entomological Collection.

Comparative notes.—Though not quite as broad as *Anisops barbata* n. sp., it appears very similar to it. However, the males of this species lack the tufts of hairs as found on the male facial tubercle of *A. barbata*. For comparison of the male front legs of the two, see Plate XLVII, fig. 58a and Plate XLVI, fig. 54a.

Data on distribution.—Known only from type series.

Anisops lipovskyi n. sp.

(Pl. XLIII, fig. 37)

Size.—Males, length 5.4 mm.-6.0 mm., greatest body width 1.5 mm.-1.7 mm.; females, length 6. mm., greatest body width 1.6 mm.

Shape.—Small, fusiform species with its greatest width midway its body length.

Color.—General facies pearlaceous. Eyes brown. Hemelytra partly hyaline and such areas appear darker as they overlie the dark brown dorsal body surface. Legs stramineous. Abdominal venter dark brown with keel and lateral margins stramineous.

Male structural characteristics.—As viewed from above, the outline of the head is rounded, with the anterior margin of the vertex extending slightly beyond that of the eyes; greatest width of head nine tenths the pronotal humeral width and seven times the anterior width of the vertex; synthlipsis wide, approximately one third the anterior width of the vertex; along the median longitudinal axis the head is at least one half the pronotal length. Pronotum with its humeral width about twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle laterally compressed forming a median carina which extends anteriorly on the frons to the apex. Rostral prong (Pl. XLIII, fig. 37b) longer than third rostral segment; apex acuminate. Labrum short; basal width one and one third its median length, apex broad and rounded. Anterior femur (Pl. XLIII, fig. 37a) truncate at apex. Stridulatory comb (Pl. XLIII, fig. 37c) of about twenty-eight teeth; greatest width at basal third. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	110	71	..
Middle leg	100	81	38	28
Hind leg	100	82	39	39

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width nine tenths the pronotal humeral width and at least five times the anterior width of the vertex; synthlipsis wide, slightly less than one half the anterior width of the vertex; along the median longitudinal axis the head is approximately three fifths the pronotal length. Pronotum with humeral width at least twice its median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	114	51	33
Middle leg	100	78	39	26
Hind leg	100	83	31	31

Location of types.—Male holotype, female allotype Jor Pokri, Sitong, Darjiling Dist. E. Himalayas, India, X-22-17, N. A. and F. G. Paratypes are as follows. In the Indian Museum: One male,

Jor Pokri, 4800', Darjiling, Dist. E. Himalayas, India, VII-6-18, S. Kemp; one male, one female, Jor Porki 4800' nr. Sitong, Darjiling Dist. E. Himalayas, India, VII-6-18, S. Kemp. In the Snow Entomological Collection; one male, Calcutta, India, in pool, XI-15-11; two males, Jor Pokri, 4800' Darjiling Dist. E. Himalayas, India, VI-6-18.

Comparative notes.—This species appears closely related to *Anisops tahitiensis* Lundblad, the males of both species have a carinate frons, an apically truncate femur and similar chaetotaxies on the front legs. The head serves best to distinguish the two, that of *Anisops tahitiensis* being broad and almost straight along its anterior margin whereas in *Anisops lipovskiji* the head is more or less conical shape with the vertex extending slightly beyond the eyes at the anterior margin.

Anisops deanei n. sp.

(Pl. XLIV, fig. 45)

Size.—Males, length 5.4 mm.-6.0 mm., greatest body width 1.3 mm.-1.5 mm.; females, length 5.7 mm.-6.3 mm., greatest body width, 1.5 mm.-1.7 mm.

Shape.—Fusiform, greatest body width midway the body length.

Color.—General facies stramineous. Eyes brown or gray. Scutellum may be irregularly tinged with crimson. Hemelytra hyaline and appear stramineous, red, or dark brown, depending on the dorsal body surface color. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous. Some forms are completely gray with the abdominal venter as above.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head nine tenths the pronotal humeral width, approximately seven times the anterior width of the vertex; synthlipsis variable, from slightly less than one third to almost one half the anterior width of the vertex; along median longitudinal axis head three fourths the pronotal length. Pronotal humeral width at least twice its median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. Facial tubercle only slightly raised; bearing scattered hairs. Labrum with basal width only slightly more than median length, apex rounded. Rostral prong (Pl. XLIV, fig. 45b) slightly longer than third rostral segment. Anterior femur slightly curved at apex. Stridulatory comb (Pl. XLIV, fig. 45c) of twenty-one to twenty-four even-length

teeth, apical one shorter than remainder. Chaetotaxy of front leg as shown on Plate XLIV. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	119	74	..
Middle leg	100	81	38	26
Hind leg	100	82	34	33

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width nine tenths the pronotal humeral width, six times the anterior width of vertex; width of synthlipsis variable from approximately one third to almost one half the anterior width of the vertex; along the median longitudinal axis the head is slightly more than three fourths the pronotal length. Pronotum with humeral width at least twice its median length; lateral margins diverging and more than one half the median length; posterior margin convex, medianly concave. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	123	62	35
Middle leg	100	78	39	27
Hind leg	100	87	36	39

Location of Types.—Male holotype, female allotype, sixteen males and ten female paratypes, New South Wales, Began River, F. Armstrong, via Mr. Deane in the Snow Entomological Collection. Other paratypes are as follows. In the Snow Entomological Collection: two males, three females, Queensland, St. George, Dist. 5, 1923, G. H. Williams; sixteen males, eleven females, Victoria Alexandria, F. L. Billingham (Kirkaldy Collection) in the Snow Entomological Collection.

Comparative notes.—This species is very similar to *Anisops hyperion* Kirkaldy.* The males of the two species offer a means of ready separation. The apex of the male front femur of *A. deanei* is slightly curved, whereas that of *A. hyperion* is acuminate. Also the apex of the third rostral segment of the male of *A. deanei* is decidedly wider than the base of the fourth, whereas in *A. hyperion* the two areas are of about the same width. For comparison of the chaetotaxies of the front legs of the males see Plate XLIV, fig. 45a and Plate XXXVIII, fig. 16a.

Data on distribution:

AUSTRALIA

Victoria, Bacchus Marsh, 1904, six males, two females (Bueno Coll. of F. H. Snow Coll.).

* nec. *Anisops hyperion* Hald.

Anisops philippinensis n. sp.

(Pl. XLIV, fig. 44)

Size.—Males, length 5.4 mm.-5.8 mm., greatest body width 1.2 mm.-1.3 mm.; females, length 5.8 mm.-6.0 mm., greatest body width 1.5 mm.-1.6 mm.

Shape.—Small, broad-headed species; body fusiform with greatest width about midway the body length.

Color.—General facies dark gray. Vertex, pronotum, and scutellum testaceous, the latter may be black with only the anterior margin testaceous. Hemelytra hyaline and appearing dark gray as it overlies the black dorsal body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the anterior margin almost straight; greatest width of head nine tenths to almost equal the pronotal humeral width, ten times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is nine tenths, to equal the pronotal length. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and at least one half the median length; posterior margin convex, medianly emarginate. Facial tubercle only slightly raised. Labrum with its basal width only slightly more than its median length; apex more or less acuminate. Rostral prong (Pl. XLIV, fig. 44b) slightly shorter than third rostral segment; apex acuminate. Stridulatory comb (Pl. XLIV, fig. 44c) of approximately seventeen teeth whose lengths increase from base to apex. Chaetotaxy of the male front leg as shown on Plate XLIV. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	83	..
Middle leg	100	85	40	28
Hind leg	100	87	30	33

Female structural characteristics.—Viewed from above, the outline of the head is rounded with its greatest width nine tenths the pronotal humeral width and seven times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is almost three fifths as long as the pronotum. Pronotum with its humeral width slightly more than twice its median length; lateral margins almost three

fifths the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	123	51	35
Middle leg	100	78	37	28
Hind leg	100	84	31	33

Location of types.—Male holotype, female allotype, forty-eight male and twenty female paratypes, Philippine Isl., Mindanao, Lake Linau, N. slope, Mt. Apo, Davao Prov. 7800', 46, H. Hoagstraal and F. G. Werner, Zoological Expedition, in the Chicago Natural History Museum. Other paratypes are: ten males, ten females, same collection data as above, in the Snow Entomological Collection.

Comparative notes.—Of about the same size and general appearance as *Anisops tahitiensis* Lundblad from which it can be readily separated by the fact that the males do not possess the carinate frons and the apically rounded front femur as found on the males of *A. tahitiensis*.

Data on distribution.—Known only from type series.

Anisops cleopatra Distant

(Pl. XLIV, fig. 43)

1914. *Anisops cleopatra* Distant, Nova Caledonia, Zoologie, vol. I, p. 386, Pl. XI, fig. 8.
 1923. *Anisops cleopatra*, Hale, Rec. South Austr. Mus., vol. II, no. 3, p. 413 (only a mention in a footnote).
 1928. *Anisops cleopatra*, Esaki, Insects of Samoa, Part II, pp. 77-78, text fig. 5 (ecological note).
 1933. *Anisops cleopatra*, Lundblad, Arch. für Hydrob., Suppl. vol. XII, pp. 145, 171-173, text figs. 59-62.

Size.—Males, length 5.4 mm.-5.8 mm., greatest body width 1.4 mm.-1.7 mm.; females, length 5.8 mm.-6.3 mm., greatest body width 1.5 mm.-1.8 mm.

Shape.—Fusiform species, with greatest body width about midway the body length.

Color.—General facies dark gray or black. Eyes dark brown or gray. Vertex and pronotum testaceous, the latter hyaline on posterior half and appearing the black color of the underlying anterior margin of the scutellum. Scutellum black with apex and lateral margins testaceous or red orange. Hemelytra hyaline and appearing dark gray or black due to the underlying color of the dorsal body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths

the pronotal humeral width and seven times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is two thirds as long as the pronotum. Pronotum with humeral width slightly more than twice its median length; lateral margins diverging and three fifths the median length; posterior margin convex, medianly emarginate. Facial tubercle only slightly raised. Labrum with its basal width slightly more than its median length; apex truncate and almost one third the basal width. Rostral prong (Pl. XLIV, fig. 43b) longer than the third rostral segment; apex truncate, though very narrow in width. Stridulatory comb (Pl. XLIV, fig. 43c) of approximately twenty-four teeth. Chaetotaxy of the male front leg as shown on Plate XLIV. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	104	69	..
Middle leg	100	85	40	30
Hind leg	100	87	31	32

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head nine tenths the pronotal humeral width and six times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is almost one half the length of the pronotum. Pronotum with its humeral width two and one half times its median length; lateral margins diverging and three fifths its median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	123	58	32
Middle leg	100	85	38	28
Hind leg	100	88	32	38

Location of types.—The type material from New Caledonia should be in the British Museum. However, neither Esaki (8) nor Lundblad (32) were able to find it. The latter is of the opinion that it may have been destroyed.

Comparative notes.—This species is about the same size and general appearance as *A. tahitiensis* Lundblad from which it can be readily separated by the fact that the males lack the laterally compressed facial tubercle and the carinate frons as found on *A. tahitiensis*.

Data on distribution:

NEW CALEDONIA

Nr. Noumea, July, 1940, F. X. Williams, eight males, ten females (F. H. Snow Coll.).

Noumea, A. Fauvel, one female, Kirkaldy Collection (F. H. Snow Coll.).

New Caledonia, Marie Schastien, Kirkaldy Collection (F. H. Snow Coll.).

Anisops praetexta Hutchinson

(Pl. XLIV, fig. 41)

1929. *Anisops praetexta* Hutchinson, Ann. South African Mus., vol. XXV, pt. 3, pp. 402-403, Pl. XXX, fig. 19; Pl. XXXII, fig. 4, 4a.

1934. *Anisops praetexta*, Poisson, Bull., Soc. Zool. France, vol. XXIX, p. 100 (ecological note).

Size.—Males, length 5.4 mm., greatest body width 1.4 mm.; females, length 5.1 mm.-5.4 mm., greatest body width 1.4 mm.-1.6 mm.

Shape.—Small fusiform species, greatest body width about mid-way the body length.

Color.—General facies brown. Vertex, pronotum, and scutellum testaceous. Hemelytra hyaline and appears dark brown due to the color of the dorsal body surface. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head almost nine tenths the pronotal humeral width and slightly more than seven times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is almost as long as the pronotum. Pronotum with its humeral width two and one third times its median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex medianly emarginate. Facial tubercle slightly raised. Labrum with its basal width equal to its median length; apex rounded. Rostral prong (Pl. XLIV, fig. 41b) longer than third rostral segment. Stridulatory comb (Pl. XLIV, fig. 41c) of approximately twelve teeth. Chaetotaxy of male front leg as shown on Plate XLIV. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	87	..
Middle leg	100	80	40	25
Hind leg	100	84	33	34

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the

pronotal humeral width and five to six times the anterior width of the vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along the median longitudinal axis the head is two third the length of the pronotum. Pronotum with its humeral width two and one half times its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	117	52	37
Middle leg	100	83	40	25
Hind leg	100	85	30	33

Location of types.—Type material from Southern Rhodesia in the South African Museum.

Comparative notes.—Very similar to *Anisops amaryllis* Hutch. and superficially the two species are almost identical. However, *A. amaryllis* does not have the short row of small setae on the basal inner surface of the male fore tarsi, as found on *A. practexta*.

Data on distribution:

AFRICA

Central Africa, one male, one female (Basel Nat. Hist., Switzerland) one female (F. H. Snow Coll.).

Anisops barbata n. sp.

(Pl. XLVI, fig. 54)

Size.—Males, length 8.6 mm.-9.3 mm., greatest body width 2.4 mm.-3 mm.; females, length 8 mm.-9.1 mm., greatest body width 2.8 mm.-3 mm.

Shape.—Robust, slightly fusiform species with the greatest body width about midway the body.

Color.—*Gray form:* General facies gray. Eyes brown. Hemelytra may be partly hyaline and such areas appear darker as they overlie the dark brown dorsal body surface. Legs testaceous. Abdominal venter black with keel and segmental margins of the connexivum testaceous. *Stramineous form:* General facies stramineous. Eyes brown. Legs stramineous; abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—As viewed from above, the outline of the head is rounded with the anterior margin of the eyes slightly in advance of that of the vertex; greatest width of the head nine tenths the pronotal humeral width and slightly more than eight times the anterior width of the vertex; synthlipsis wide, at

least two thirds the anterior width of the vertex; along the median longitudinal axis the head is approximately one half the length of the pronotum. Pronotum with its humeral width twice its median length; lateral margins diverging and approximately one half the median length; posterior margin convex, medianly emarginate; dorsal surface with a faint median depression and a concavely curved ridge on either side, halfway between the median line and the lateral margin. Facial tubercle with two tufts of hairs, one on either side of the median line, which extend posteriorly to the base of the labrum. Labrum with its basal width slightly more than its median length, and with its apex more or less acuminate. Rostral prongs (Pl. XLVI, fig. 54b) with their length slightly less than that of the third rostral segment; apex acuminate. Chaetotaxy of the male front leg as shown on Plate XLVI. The relative length of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	119	86	..
Middle leg	100	84	33	22
Hind leg	100	77	30	25

Female structural characteristics.—As viewed from above, the outline of the head is rounded with its greatest width approximately nine tenths the pronotal humeral width and slightly more than six times the anterior width of the vertex; synthlipsis wide, two thirds the anterior width of the vertex; along the median longitudinal axis the head is less than one half the pronotal lengths. Pronotum with humeral width twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate; dorsal surface with same markings as male only fainter. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	126	56	38
Middle leg	100	83	36	21
Hind leg	100	79	33	25

Location of types.—Male holotype, female allotype, nine male, six female paratypes, Rambha, Ganjam Dist. Madras, India, IX-20-13, Annandale, in the Indian Museum at Calcutta. Other paratypes are as follows: In the Snow Entomological Collection: Seven males, seven females (same collection data as above); one male, one female, Barkuda, Chilka Lake, Madras Pres., India, VIII-19, F. H. Gravely; one male, Java, VIII-1939. In the Indian Museum at Calcutta: One male, Waltair, India, I-27-21; eight females, Barkuda,

Chilka Lake, Ganjam Dist., Madras, India, IX-23-19, N. A.; two males, Rambha, Ganjam, fr. an ornamental fountain, XII-30-18, N. A.; three males, one female, Bangalore, S. India, ca 3000 ft., X-13-10, Annandale; two females, Markiuppon, S. India, ca 2500 ft.; one male, Barkul, Puri Dist. Orissa, India, XI-9 to 13-12, Gravely; one female, Lucknow, I-16-13, Mus. Collr. R. H.; one female Sata-pare, Lake Dhillha, Orissa, IV-16-13, Annandale; two females, Berhampur Murshidabad, Bengal, Sept. '12, Southwell. In the Usinger Collection; two males, one female, Java, VIII-1939.

Comparative notes.—This species is of about the same size and superficial appearance as *Anisops stali* Kirkaldy. It has, however, two tufts of hairs on the facial tubercle that are lacking on the facial tubercle of the latter species. Also *A. stali* has a slightly depressed frons and a faint anterior cephalic projection, both are lacking on *A. barbata*. For comparison of the chaetotaxies of the male front legs see Plate XLVI, fig. 54a and Plate XXXVII, fig. 9a.

Data on distribution:

BURMA

S. Shan States, Yawaghee, Heho, 3800', III-7-17, Gravely (F. H. Snow Coll.).

INDIA

Kalka, base of Simla Hills, 2400', VII-16-11, one male, two females (F. H. Snow Coll.).

S. India, Bangalore, 3000', X-16-10, Annandale, three males, one female (F. H. Snow Coll.).

Bengal, Madhupur, IV-28-to V-7-11, C. Paiva, nine males, four females (F. H. Snow Coll.).

India, Kalka, base of W. Himalayas, V-16-11, Annandale, three males, one female (F. H. Snow Coll.).

Madras, Ganjam Dist., Rambha, IX-20-13, Annandale, nine males, fifteen females (F. H. Snow Coll.).

Patiola State Dhurampur Kooa, base of Simla Hills, VII-2-11, one female (F. H. Snow Coll.).

Brindia, Pulney Hills, L. V. Newton, S. J., two males, three females (Bueno Coll. of F. H. Snow Coll.).

JAVA

Java, Le Moul, one female (Bueno Coll. of F. H. Snow Coll.).

FORMOSA

Formosa one male (F. H. Snow Coll.).

Anisops grandis Poisson

(Pl. XLV, fig. 50)

1937. *Anisops pellucens grandis* Poisson. Ann. Soc. Ent. France, vol. XVI, p. 130.

Size.—Males, length 9.0 mm.-9.3 mm., greatest body width 2.7 mm.; females, length 9.3 mm.-10.0 mm., greatest body width 2.7 mm.-3.0 mm.

Shape.—Large, fusiform species; greatest body width midway the body length.

Color.—General body color testaceous. Eyes brown. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head eight tenths the pronotal humeral width and seven to eight times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is almost one half the length of the pronotum. Pronotum with its humeral width almost twice the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum with its basal width one and three tenths the median length; apex rounded. Rostral prong (Pl. XLV, fig. 50b) slightly shorter than the third rostral segment; apex more or less acuminate. Stridulatory comb (Pl. XLV, fig. 50c) of approximately twenty teeth. Chaetotaxy of the male front leg as shown on Plate XLV. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	127	91	..
Middle leg	100	89	33	22
Hind leg	100	82	32	29

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width and slightly more than five times the anterior width of the vertex; synthlipsis wide, two thirds the anterior width of the vertex; along the median longitudinal axis the head is one half the length of the pronotum. Pronotum with its humeral width slightly more than twice the median length; lateral margins diverging and almost one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	128	55	36
Middle leg	100	89	33	25
Hind leg	100	78	28	23

Location of types.—The type material for *Anisops pellucens grandis* Poisson from Tananarive Madagascar is in the Paris Museum.

Comparative notes.—This species is very closely related to *Ani-*

sops pellucens Gerst. and can be successfully separated only on the basis of the males. The males of *A. grandis* have a narrower anterior width of the vertex, one seventh to one eighth the greatest width of the head, instead of one sixth as in *A. pellucens*. Also the males lack the apical spine on the inner surface of the anterior margin of the fore tibia as found on *A. pellucens*. The rostral prongs are shaped somewhat differently, that of *Anisops pellucens* being much wider in its apical half than that of *A. grandis*.

Remarks.—I am raising *Anisops pellucens grandis* Poisson to specific level on the basis of the above mentioned differences from *A. pellucens*.

Data on distribution:

MADAGASCAR

Tananarive, 1921, R. Decary, one male, one female (F. H. Snow Coll.); one male, one female (Paris Museum).

Madagascar, 1899, Grandidier, four females (Paris Museum).

Marais du Fimerna, 1905, F. Geay, five females (Paris Museum).

Region de L'Androy Ambouvombe, I-15-1901, Dr. F. DeCorse, one female (Paris Museum).

Madagascar, two males, two females (U. S. Nat. Mus.).

Madagascar, Diego Suarez, 1893, Ch. Alluaud, one male (U. S. Nat. Mus.).

Betaimisaratha, exchange fr. Horvath, two females (F. H. Snow Coll.).

Madagascar, one male, six females (Bueno Coll. of F. H. Snow Coll.).

Anisops tanalensis n. sp.*

(Pl. XLIV, fig. 46)

Size.—Males 5.8 mm.-6.3 mm., greatest body width 1.6 mm.-1.9 mm.

Shape.—Subfusiform species; greatest body width midway the length of the body.

Color.—General facies dark gray. Eyes dark brown. Vertex and pronotum testaceous, the latter may have a brown median spot. Scutellum black with lateral margins testaceous or testaceous with only apical half black. Hemelytra hyaline and appear the black color of the dorsal body surface. Legs stramineous. Abdominal venter dark brown or black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the anterior margin almost straight; greatest width of head almost as wide as the pronotal width and slightly more than seven times the anterior width of the vertex; synthipsis wide, one half the anterior width of the vertex; along the

* No females were present in the material at my disposal.

median longitudinal axis the head is two thirds the length of the pronotum with its humeral width almost twice the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum long; median length almost equal to the basal width; apex rounded. Rostral prong (Pl. XLIV, fig. 46b) longer than the third rostral segment; apex acuminate. Anterior femur rounded at the apex. Stridulatory comb (Pl. XLIV, fig. 46c) of approximately thirteen teeth; apical three shorter than basal ten. Chaetotaxy of the male front leg as shown on Plate XLIV. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	115	92	..
Middle leg	100	85	40	28
Hind leg	100	86	31	34

Location of types.—Male holotype, Madagascar, Foret Tanala, Reo de Ranonafana, Anorojoro, 1901, Ch. Alluaud, in the Paris Museum. Paratypes are as follows: one male, Madagascar, Diego-Suarez, 1901, Ch. Alluaud, in the Paris Museum; one male (same collection data as type) in the Francis H. Snow Collection.

Comparative notes.—This species appears closely related to *Anisops alluaudi* Poisson and differs from it by the fact that the males have the apex of the front femur rounded, whereas that of *A. alluaudi* is acuminate.

Data on distribution.—Known only from type series.

Anisops windi n. sp.

(Pl. XLV, fig. 48)

Size.—Males, length 5.2 mm.-5.4 mm., greatest body width 1.4 mm.; females, length 4.8 mm., greatest body width 1.3 mm.

Shape.—Small, slightly fusiform species, greatest body width almost midway the body length.

Color.—Eyes brown. Vertex and pronotum testaceous. Scutellum testaceous, orange, or black with lateral margins crimson. Hemelytra hyaline and may appear black or stramineous, depending on the color of the underlying color of the dorsal body surface. Hemelytra may be tinged with crimson along scutellar margins. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the anterior margins of the eyes ex-

tending slightly beyond that of the vertex; greatest width of the head nine tenths the pronotal humeral width, approximately nine times the anterior width of the vertex; synthlipsis wide, nine tenths the anterior width of the vertex; along the median longitudinal axis the head is four fifths the length of the pronotum. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and slightly more than twice its median length; posterior margin convex, medianly emarginate. Facial tubercle only slightly raised; bearing long procumbent hairs. Labrum hairy; basal width equal to median length; apex rounded. Rostral prong (Pl. XLV, fig. 48b) longer than third rostral segment; apex acuminate. Stridulatory comb (Pl. XLV, fig. 48c) of approximately seventeen, almost even-length, teeth. Chaetotaxy of the males front leg as shown on Plate XLV. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	127	82	..
Middle leg	100	79	38	27
Hind leg	100	86	30	36

Female structural characteristics.—Viewed from above, the outline of the head is rounded with its greatest width nine tenths the pronotal humeral width and five times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is three fifths the pronotal length. Pronotum with its humeral width almost twice the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	109	*	*
Middle leg	100	88	44	26
Hind leg	100	81	31	31

Location of types.—Male holotype, female allotype, Australia, N. Queensland, Barren River near Redlyach, IX-21-28, R. G. Wind, in the Snow Entomological Collection. One male paratype, Rocky Scrub, McIlwraith Rge. C. York, Queensland, Australia, Harvard Exped., Darlington, in the Harvard Museum of Comparative Zoology.

Comparative notes.—This species appears somewhat similar to *A. barrenesis* n. sp. from which it can be distinguished on the basis

* Lacking on the female at my disposal. Specimen mutilated.

of the males which lack the greatly swollen anterior femur as found on the latter.

Data on distribution.—Known only from type series.

Anisops leucothea Esaki

(Pl. XLV, fig. 47)

1926. *Anisops leucothea* Esaki, Insects of Samoa, Part II, pp. 76-80, text fig. 6.

1933. *Anisops leucothea*, Lundblad, Arch. für Hydrob., Suppl. vol. XII, p. 145 (a list of Indo-australian and Pacific forms of this genus).

Size.—Males, length 7.2 mm.-7.3 mm., greatest width of body 2.1 mm.-2.2 mm.; females, length 6.9 mm.-7.6 mm., greatest body width 1.5 mm.-2.3 mm.

Shape.—Robust, slightly fusiform species; lateral margins in anterior half of body almost parallel, converging in posterior half of body.

Color.—General facies stramineous. Eyes brown. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the head is broad with its outline rounded; greatest width of head equal to the pronotal humeral width and seven to eight times the anterior width of the vertex; synthlipsis wide, over one half the anterior width of the vertex; along the median longitudinal axis the head slightly more than half the length of the pronotum. Pronotum with its humeral width one and two thirds its median length; lateral margins more or less parallel with their length two thirds the median length; posterior margin convex, medianly emarginate. Facial tubercle only slightly raised. Labrum long, median length slightly more than its basal width; apex rounded; base of the labrum set with long hairs that extend the full length of the labrum. Rostral prong (Pl. XLV, fig. 47c) slightly shorter than the third rostral segment; apex acuminate. Stridulatory comb (Pl. XLV, fig. 47b) of approximately nineteen teeth. Chaetotaxy of the male front leg as shown on Plate XLV. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	103	72	..
Middle leg	100	81	48	27
Hind leg	100	80	25	28

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width and six times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior

width of the vertex; along the median longitudinal axis the head is three fifths as long as the pronotum. Pronotum with humeral width slightly more than twice the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	114	57	36
Middle leg	100	85	42	37
Hind leg	100	81	28	28

Location of types.—Male and female types, six male and eight female paratypes, Upolu: Mulifanua, XI-9-1925, in the British Museum.

Comparative notes.—Very similar to *Anisops occipitalis* Breddin and only the males can be relied on for accurate separation. On the males of *A. leucothea* Esaki the width of the head is equal to the pronotal humeral width and the lateral margins of the pronotum are almost parallel whereas on the males of *A. occipitalis* the head is only nine tenths the pronotal humeral width and the lateral pronotal margins are diverging. Also the head of the former is seven to eight times the anterior width of the vertex while in the latter the head is approximately six times the anterior width of the vertex.

Data on distribution:

WALLIS ISLAND

Uvea, Lake Kikila, 1903, Dr. Joly, one male (compared with type by Dr. Hungerford), two females (F. H. Snow Coll.); one male five females (Paris Museum).

Anisops doris Kirkaldy

(Pl. XLVI, fig. 53)

1904. *Anisops doris* Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 112, 132.

1923. *Anisops doris*, Hale, Rec. South Australian Mus., vol. 11, no. 3, p. 402-403, text fig. 364, Pl. XI, fig. 11 (evidently had a mixture of two or more species).

*1924. *Anisops doris*, Hale, South Australian Nat., vol. V, no. 4, p. 135 (note on migration).

1933. *Anisops doris*, Lundblad, Arch. für Hydrob., Suppl. vol. XII, p. 145 (a list of Indo-australian and Pacific forms of this genus).

1934. *Anisops doris*, Hungerford, Bull. Brooklyn Ent. Soc., vol. XXIX, p. 68 (ecological note; inaccurate as composite species, neither of which *A. doris* Kirkaldy).

*1935. *Anisops doris*, Hale, Trans. Royal Soc. South Australia, vol. LIX, p. 249 (ecological ncte).

Size.—Males, length 7.5 mm.-7.8 mm., greatest body width 1.8 mm.; females, length 7.2 mm.-7.4 mm., greatest body width 1.8 mm.-1.9 mm.

* Questionable, due to previous inaccuracy in determination.

Shape.—Broad-headed, fusiform species; greatest body width about midway the body length.

Color.—General facies stramineous. Eyes brown. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width of the head slightly more than the pronotal humeral width and about eight and one half times the anterior width of the vertex; synthlipsis wide, at least one third the anterior width of the vertex; along the median longitudinal axis the head is nine tenths the length of the pronotum. Pronotum with its humeral width slightly less than twice its median length; lateral margins slightly convex, almost parallel; two thirds the median length of the pronotum. Frons narrow, about the width of the synthlipsis; facial tubercle only slightly raised. Labrum with its basal width slightly more than its median length; apex rounded. Rostral prong (Pl. XLVI, fig. 53b) shorter than the third rostral segment; apex acuminate. Stridulatory comb (Pl. XLVI, fig. 53c) of approximately fifty-four closely appressed teeth. Chaetotaxy of the front leg as shown on Plate XLVI. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	131	78	..
Middle leg	100	80	33	27
Hind leg	100	81	30	35

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head nine tenths the pronotal humeral width and six times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is two thirds the median length; lateral margins diverging and three fourths the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:*

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	123	56	35
Middle leg	100	89	38	30

Location of types.—Male type, two male and two female cotypes, Australia, Victoria, Alexandria, F. L. Billingham in the Kirkaldy collection of the Snow Entomological Collection.

* Neither of the two females available for study possessed hind legs.

Comparative notes.—This species is about the same size as *Anisops gratus* Hale. However, the two may be readily separated on the basis of the males which in *A. doris* Kirkaldy have the head greater in width than the pronotum humeral width and the anterior width of the vertex is greatly reduced, slightly less than one eighth the width of the head, whereas in *A. gratus* the greatest width of the head is only nine tenths the pronotal humeral width and the anterior width of the vertex is at least one fifth the greatest width of the head.

Data on distribution:

AUSTRALIA

Victoria, Bacchus Marsh, I-9-14, one male, two females (Bueno Coll. of F. H. Snow Coll.).

Anisops wakefieldi White

(Pl. XLVII, fig. 55; Pl. LVII, fig. 106)

1878. *Anisops wakefieldi* White, The Entomologist Month. Mag., vol. XV, p. 161.

1897. *Anisops wakefieldi*, Hutton, Trans. New Zealand Inst., vol. XXX, pp. 179-180.

1904. *Anisops wakefieldi*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 111, 132.

1908. *Anisops wakefieldi*, Kirkaldy, Trans. New Zealand Inst., vol. XLI, p. 27 (ecological note).

1914. *Anisops wakefieldi*, Myers, Trans. New Zealand Inst., vol. 56, pp. 468-469.

1933. *Anisops wakefieldi*, Lundblad, Arch. für Hydrob., Suppl. vol. XII, p. 146 (a list of Indo-australian and Pacific forms of this genus).

Size.—Males, length 7.5 mm., greatest body width 1.9 mm.; females, length 8.1 mm.-8.4 mm., greatest body width 2.1 mm.-2.2 mm.

Shape.—Subfusiform species; lateral margins of the anterior third of the body almost parallel, only slightly converging; lateral margins strongly converging in the posterior two thirds of the body.

Color.—*Brown form:* General facies stramineous. Eyes brown. Abdominal venter dark brown with keel and segmental margins of the connexivum and stramineous. *Dark form:* General facies gray. Eyes brown. Vertex and pronotum testaceous, the latter with the posterior half hyaline and appears black as it overlies the black anterior portion of the scutellum. Scutellum black with its lateral margin stramineous. Hemelytra hyaline and appear dark gray as they overlie the black dorsal body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with its greatest width nine tenths the pronotal humeral width and slightly more than four times the anterior width of the vertex; synthlipsis wide, three fifths the anterior width of the vertex; along the median longitudinal axis the head is almost

one half the length of the pronotum. Pronotum with its humeral width one and one half its median length; lateral margins diverging and one-half the median length; posterior margin convex, medianly emarginate. Facial tubercle swollen into a ventrally directed triangular eminence, with its apex acuminate. Labrum with its basal width only slightly more than its median length; apex rounded. Rostral prong (Pl. LVII, fig. 106) greatly reduced, only one fourth the length of the third rostral segment; apex truncate. Stridulatory comb (Pl. XLVII, fig. 55b) of approximately eighteen teeth. Chaetotaxy of the male front leg as shown on Plate XLVII. The relative lengths of the parts of the legs are as follows:*

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	110	70	..

Female structural characteristics.—Viewed from above, the outline of the head is rounded, with its greatest width eight to nine tenths the pronotal humeral width and four times the anterior width of the vertex; synthlipsis wide, two thirds the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one third the length of the pronotum. Pronotum with its humeral width one and three fourths its median length; lateral margins diverging and less than one half the median length; posterior margin convex, medianly emarginate. Facial tubercle swollen to form a triangular shaped eminence as in the males, but not as large or as acuminate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	102	46	38
Middle leg	100	83	35	24
Hind leg	100	80	31	31

Location of types.—White's type material from Canterbury and Otago, New Zealand in the Perth Museum.

Comparative notes.—This species closely resembles *A. assimilis* White. However, the pronotum of the male of the latter species has its lateral margins almost parallel whereas in *A. wakefieldi* the pronotal lateral margins are diverging. Also the males of the latter lack the greatly swollen facial tubercle as found on the former.

Data on distribution:

NEW ZEALAND

Queenstown, 1875, Hutton, one male, (F. H. Snow Coll.).

Nelson, 1876, Filhal, two females (F. H. Snow Coll.).

New Zealand, one female (F. H. Snow Coll.).

* Only the front leg was intact on the single male specimen at my disposal.

Anisops hancocki Hutchinson

(Pl. XLVI, fig. 52; Pl. LV, fig. 96)

1928. *Anisops hancocki* Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. I, pp. 163-164, text fig. 7.

1933. *Anisops hancocki*, Hutchinson, Internat. ges. Hydrob. und Hydrog., vol. 28, pt. 5/6, p. 462 (ecological note).

Referring to this species also:

1939. *Anisops murati*, Poisson, Bull. Soc. Ent. France, vol. 44, pp. 43-44, text figs. 2, 3.

Size.—Males, length 6.3 mm.-6.9 mm., greatest body width 1.9 mm.-2.3 mm.; females, length 6.4 mm.-6.9 mm., greatest body width 1.9 mm.-2.2 mm.

Shape.—Robust, fusiform species; greatest body width about midway the body length.

Color.—General facies brown. Eyes brown. Vertex, pronotum and scutellum testaceous, the latter may be brown with only apex testaceous and may have its lateral margins red. Hemelytra hyaline and appear dark brown due to the brown color of the dorsal body surface. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous. One specimen is flavus, probably a teneral form.

Male structural characteristics.—Viewed from above, the anterior margin of the head is almost straight; laterally curved; greatest width of head nine tenths the pronotal humeral width and four and one half times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is short, less than one half the length of the pronotum. Pronotum with its humeral width twice its median length; lateral margins diverging and one half the median length. Posterior margin convex, medianly emarginate. Facial tubercle excavate; lateral margins carinate. Labrum broad; basal width one and two thirds the median length; apex rounded; a long tuft of hairs at each basal angle. Rostral prong (Pl. LV, fig. 96) shorter than third rostral segment; apex more or less rounded. Stridulatory comb (Pl. XLVI, fig. 52b) of approximately ten teeth which decrease in length at the apex. Keel of the second abdominal segment enlarged laterally and excavate medianly; lateral margins carinate and bearing long erect hairs; excavation lined with short procumbent hairs. Connexivum of the third abdominal segment with a row of nodules on its inner margin extending from base to apex; basal two nodules greatly enlarged. Chaetotaxy of the male front leg as shown on Plate XLVI. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	108	87	..
Middle leg	100	83	42	29
Hind leg	100	80	31	31

Female structural characteristics.—Viewed from above the outline of the head is rounded; greatest width of head eight tenths the pronotal humeral width and almost four times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the length of the pronotum. Pronotum with its humeral width two and one third the median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	118	57	28
Middle leg	100	81	50	23
Hind leg	100	81	33	33

Location of types.—Male type and one male paratype, Uganda, Kampala, III-20-1927, G. L. Hancock, in the British Museum.

Comparative notes.—This species is very similar to *A. psyche* Hutchinson and differs from it by having the fore femur of the male greatly enlarged dorso-ventrally just before the base, a condition lacking in *A. psyche*. For comparison of the chaetotaxies of the front legs of the males see Plate XLVI, fig. 52a and Plate XLIII, fig. 38a.

Remarks.—*A. murati* Poisson, according to the drawings and description of Poisson appears to be identical in every respect to *Anisops hancocki*. So I am placing this species as a synonym of the later.

Data on distribution:

AFRICA

Uganda, Kampala, XI-20-1929, G. E. Hopkins, one male (F. H. Snow Coll.).
Orient. Angl. Sambourou, Wa-Nyika, 1904, Ch. Alluaud, one male (F. H. Snow Coll.).

East Africa, IV-21-1949, F. X. Williams, two males (Harv. Mus. Comp. Zool.).

Soudan, Nioro, 1909, F. de Zeltner, one male (Paris Museum).

Sudan, Rock pool, R. Yei Equatoria, Dec. 11, 1937, J. G. Myers, one male, two females (Brit. Mus.).

Ogaden, Ouabi-Chebéli, Imi Mission, 1903, Du Bourg du Bozas, one male (Paris Museum).

Anisops decipiens Hutchinson

(Pl. XLVIII, fig. 62)

1930. *Anisops decipiens* Hutchinson, Proc. Zool. Soc. London, vol. XXIX, pt. 2, pp. 448-449, text figs. 4, a, b, c.1932. *Anisops decipiens*, Hutchinson, Proc. Zool. Soc. London, vol. XXXI, pt. 1, pp. 125-126 (ecological note).

Size.—Males, length 6 mm., greatest body width 1.8 mm.; females, length 7.4 mm., greatest body width 2.1 mm.

Shape.—Robust, slightly fusiform species; greatest width at humeral margins of pronotum.

Color.—General facies dark brown. Eyes dark brown. Vertex and pronotum testaceous, the latter irregularly hyaline and with a median brown spot. Scutellum dark brown, lateral margins crimson. Hemelytra hyaline and appearing the dark brown color of the underlying dorsal body surface. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the head is short with the outline rounded, anterior margin almost straight; greatest width of the head nine tenths the pronotal humeral width and five times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one third the length of the pronotum. Pronotum with its humeral width twice the median length; lateral margins diverging and less than one half the median length; posterior margin convex, medianly emarginate. Facial tubercle only slightly raised. Labrum with its basal width almost one and one third the median length; apex rounded. Rostral prong (Pl. XLVIII, fig. 62c) equal to the length of the third rostral segment; apex acuminate. Stridulatory comb (Pl. XLVIII, fig. 62b) of approximately seven stout teeth which increase in length at the middle. Chaetotaxy of the front leg as shown on Plate XLVIII. The relative lengths of the parts of the legs are as follows:*

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	119
Middle leg	100	81	38	23

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head eight tenths the pronotal humeral width and slightly more than four times the

* Unfortunately, the single male specimen in my material was minus the fore tarsi and the hind legs.

anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is one half the length of the pronotum. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and almost one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:†

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	122	56	33
Middle leg	100	82	36	21

Location of types.—Male type, female allotype, and one female paratype, Asbysinnsi, Wouranboulchi, XI-4th to 7th-1926, J. Omer-Cooper, in the British Museum.

Comparative notes.—Superficially similar to *Anisops ares* Hutchinson from which it distinguishes itself by the fact that the males lack the dorso-ventrally expanded front femur with the curved apex as found on the males of *A. ares*.

Data on distribution:

AFRICA

Abyssinia, Djem-Djem Forrest, circa. 8000', X-21-1926, J. Omer-Cooper, one male, one female, gift to H. B. H. from G. E. Hutchinson (F. H. Snow Coll.).

Anisops barrenensis n. sp.

(Pl. XLIV, fig. 42)

Size.—Males, length, 4.8 mm.-5.1 mm., greatest body width 1.4 mm.-1.6 mm.; females, length 4.8 mm.-5.1 mm., greatest body width 1.4 mm.-1.6 mm.

Shape.—Small, robust, fusiform species; greatest body width midway the body length.

Color.—General facies gray. Eyes brown. Vertex may be tinged with orange. Hind margin of pronotum may be hyaline and appear black as it overlies the black anterior portion of the scutellum. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the anterior margin almost straight; greatest width of head nine tenths the pronotal humeral width; four and one half times the anterior width of the vertex; synthlipsis

† The female specimen in my material was minus the hind legs.

wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is slightly less than one half the pronotal length. Pronotum with its humeral width slightly less than twice the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate; dorsal surface with a faint median ridge and a convexly curved ridge on each side between median line and lateral margin. Facial tubercle slightly raised and bearing a few hairs. Posterior margin of third rostral segment covered for almost its entire length by an extension of the second rostral segment (Pl. XLIV, fig. 42b). Rostral prong acuminate. Labrum covered with small fine hairs; basal width only slightly greater than median length; apex truncate. Stridulatory comb (Pl. XLIV, fig. 42c) of approximately sixteen teeth. Chaetotaxy of the male front leg as shown on Plate XLIV. The relative lengths of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	116	83	..
Middle leg	100	81	39	28
Hind leg	100	86	31	36

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width, slightly more than four times the anterior width of the vertex; synthlipsis wide, more than one half the anterior width of the vertex; along the median longitudinal axis the head is one half the pronotal length. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate, dorsal ridges as in the males. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	116	50	28
Middle leg	100	80	37	26
Hind leg	100	86	31	36

Location of types.—Male holotype, female allotype, twenty-one male and twenty-nine female paratypes. N. Queensland, Barren River nr. Barren Waters, IX-9-28, R. Wind, in the Snow Entomological Collection. Other paratypes are as follows. In the Harvard Museum of Comparative Zoology: one male, two females, Queensland, Australia, Coen C. York, May 32, Darlington, Harv. Austr. Exped.

Comparative notes.—Very similar to *A. hackeri* n. sp. from which it differs by the fact that the males of the latter do not have the greatly expanded front femur as found on *A. barrenensis*.

Data on distribution.—Known only from type series.

Anisops hungerfordi Poisson

(Pl. XLVI, fig. 51)

1935. *Anisops hungerfordi* Poisson, Mus. Nat. Hist. Nat., vol. III, p. 213, text fig. 23, A, B, C.

Size.—Males, length 5.1 mm., greatest body width 1.5 mm.; females, length 5.4 mm., greatest body width 1.5 mm.

Shape.—Small, robust, slightly fusiform species; greatest body width about midway the body length.

Color.—General facies stramineous. Eyes brown. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head nine tenths the pronotal humeral width and six times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is almost one half the length of the pronotum; lateral margins diverging and almost one half the median length; posterior margin straight. Facial tubercle flat. Labrum long with its median length almost one and one third the median length; apex rounded. Rostral prong (Pl. XLVI, fig. 51b) longer than third rostral segment; apex rounded. Stridulatory comb (Pl. XLVI, fig. 51c) of approximately fifteen teeth which decrease in length in apical half. Chaetotaxy of the male front leg as shown on Plate XLVI. The relative lengths of the parts of the legs are as follows:*

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	121	81	..
Middle leg	100	76	37	27

Female structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width nine tenths the pronotal humeral width and four to five times the anterior width of the vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the pronotal length. Pronotum with its humeral width slightly more than twice the median length; lateral margins diverging and almost one half the median length;

* Hind leg not complete on single male specimen in my material.

posterior margin straight. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	117	50	33
Middle leg	100	76	37	28
Hind leg	100	91	32	32

Location of types.—Type material from Bourille, Ethiopia in the Paris Museum.

Comparative notes.—This species is very similar to *A. apicalis* Stål and differs from it primarily by the fact that the wings are not brachypterous; also the scutellum is larger, its basal width only one and one fourth the median length instead of one and three fourths the median length as in *A. apicalis*.

Data on distribution:

AFRICA

Belgian Congo, Mucosa, XI-1939, H. S. Bredo, one male, two females (Roy. Mus. Nat. Hist. Belg.).

Belgian Congo, Mucosa, VIII-3-1927, H. H. Bredo, two females (Roy. Mus. Nat. Hist. Belg.).

Belgian Congo, Elizabethville, I-10-1938, H. S. Bredo (Roy. Mus. Nat. Hist. Belg.).

Anisops ares Hutchinson

(Pl. XLVII, fig. 57)

1926. *Anisops ares* Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. I, pp. 104-106, text fig. 8.

1933. *Anisops ares*, Hutchinson, Internat. ges. Hydrob. und Hydrog., vol. 28, pt. 5/6, p. 462.

Referring to this species also:

1928. *Anisops coxalis*, Poisson, Bull. Soc. Ent. France, no. 4, p. 74.

1929. *Anisops coxalis*, Poisson, Fauna des Colonies Francaises, vol. III, pp. 152-154, figs. 20, 21.

1948. *Anisops coxalis*, Poisson, Rev. Francaise Ent., vol. XV, p. 168 (ecological note).

Size.—Males, length 6.5 mm.-7.1 mm., greatest body width 1.9 mm.-2.1 mm.; females, length 6.0 mm.-6.3 mm., greatest body width 1.2 mm.-1.4 mm.

Shape.—Robust, slightly fusiform species; greatest body width at the humeral width of the pronotum.

Color.—Light form: General facies stramineous. Eyes brown. Apical third of hemelytra dark brown. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous. *Dark form:* Eyes brown. Vertex brown. Vertex and pronotum testaceous, the latter may be hyaline on its posterior half and appear the black color of the underlying scutellum. Scutellum dark brown or black. Hemelytra hyaline with

posterior third dark brown or black; hyaline areas appear dark brown or black depending on the underlying color of the dorsal body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the lateral margins of the head are curved and the anterior margin almost straight; greatest width of the head only slightly narrower than the pronotal humeral width and six times the anterior width of the vertex; synthlipsis wide, at least one half the anterior width of the vertex; along the median longitudinal axis head is short, only one third the pronotal length. Pronotum long, humeral width one and two thirds the median length; lateral margins slightly diverging and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum short, basal width slightly more than the median length; apex rounded. Rostral prong (Pl. XLVII, fig. 57b) longer than the third rostral segment; apex acuminate. Fore leg (Pl. XLVII, fig. 57a) with the dorsal and ventral margins of the femur almost parallel for the basal three fourths of their length; apex rounded; stridulatory comb (Pl. XLVII, fig. 57c) of approximately eleven teeth, the apical five slightly longer than the basal six. Chaetotaxy of the male front leg as shown on Plate XLVII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	105	73	..
Middle leg	100	82	33	24
Hind leg	100	82	33	30

Female structural characteristics.—Viewed from above, the outline of the head is curved laterally and almost straight on its anterior margin; greatest width of head nine tenths the pronotal humeral width and six times the anterior width of the vertex; along the median longitudinal axis the head is one half the length of the pronotum. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	117	56	33
Middle leg	100	77	35	27
Hind leg	100	86	37	37

Location of types.—Male type, female allotype, three male and two female paratypes Uganda, Kampala, III-20-1927, in the British Museum.

Comparative notes.—Very similar to *Anisops varia* Fieber but can easily be separated on the basis of the males. The males of the latter species have a much shorter pronotum which is twice the length of the head instead of three times the length of the head as in *A. ares*. Also, the male front femur of *A. varia* has its dorsal and ventral margin converging from the base, instead of the almost parallel condition as found on *A. ares*.

Remarks.—*Anisops ares* Hutchinson was described from a form occurring in Uganda and *A. coxalis* was described from Cameron. The material at my disposal reveals that *A. ares* is a species of wide distribution occurring in South Africa, Tanganyika, Uganda west to Cameron, and that *A. coxalis* is a synonym of *A. ares*.

Data on distribution:

AFRICA

South Africa, Natal, Mahira Forrest, IX-1920, through R. A. Drummer, four males, five females (U. S. Nat. Mus.).

Uganda, Kampala, I-20-30, G. E. Hopkins, gift to H. B. H. from G. E. Hutchinson, one male, one female (F. H. Snow Coll.).

Tanganyika, Mpala, Oberthur, one male, three females (Paris Museum).

Tanganyika, Amani, Feb. 1948, F. X. Williams, one female (Harv. Mus. Com. Zool.).

Cameroons, W. Africa, Sangmelina, 4-16-32, A. I. Good, fifteen males, twenty females (F. H. Snow Coll.).

Cameroons, W. Africa, Sangmelina, Oct. 17, 1934, A. I. Good, twenty-five males, fourteen females (F. H. Snow Coll.).

Nigeria, Abakaliki, I-26-49, B. Malkin, one male, four females (Calif. Acad. of Science).

Anisops paranigrolineata n. sp.

(Pl. XLVIII, fig. 59)

Size.—Males, length 6.0 mm., greatest body width 5.4 mm.; females, length 6.0 mm.-6.3 mm., greatest body width 1.8 mm.-1.9 mm.

Shape.—Fusiform species, with eyes much wider than the anterior width of the pronotum; greatest body width about midway the body length.

Color.—*Brown form:* General facies stramineous. Eyes brown. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous. *Dark form:* Eyes dark brown. Vertex stramineous. Pronotum testaceous with posterior margin appearing black as it is hyaline and overlies the black anterior margin of the scutellum. Hemelytra hyaline and appearing black as it overlies the black dorsal body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal width, five to six times the anterior width of the vertex; synthlipsis wide, almost nine tenths the anterior width of the vertex; along the median longitudinal axis the head is less than one third the length of the pronotum. Pronotum with its humeral width one and one fourth its median length; lateral margins diverging and almost one half the median length; posterior margin convex; dorsal surface with a faint median ridge and a longitudinal convexly curved ridge on each side, near the lateral margin. Facial tubercle slightly raised and spread out laterally. Labrum greatly reduced in length; basal width almost four times the median length; rounded along anterior margin. Rostral prong (Pl. XLVIII, fig. 59b) shorter than third rostral segment, apex rounded. Anterior femur greatly enlarged dorso-ventrally at base; apex acuminate. Stridulatory comb (Pl. XLVIII, fig. 59c) of approximately eighteen teeth. Chaetotaxy of the male front leg as shown on Plate XLVIII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	132	86	..
Middle leg	100	73	43	25
Hind leg	100	83	33	34

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width nine tenths the pronotal humeral width, though much wider than the anterior width of the pronotum; greatest width of head slightly more than five times the anterior width of the vertex; synthlipsis wide, almost eight tenths the anterior width of the vertex; along the median longitudinal axis the head is almost one third the length of the pronotum. Pronotum with its humeral width one and one half its median length; lateral margins concave and diverging, almost one half the median length; posterior margin convex; dorsal ridges present as in male though somewhat fainter. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	128	57	36
Middle leg	100	74	37	27
Hind leg	100	84	33	33

Location of types.—Male holotype, female allotype, Mahabaleshwar, Satara Dist. India. 4200', V-13 to 16-12, F. H. Gravely, in the Indian Museum at Calcutta. Other paratypes are as follows. In the Indian Museum at Calcutta: one male, one female, Satara

Dist, Nachal, W. Chats, 2000', IV-30-12, F. H. Gravely. In the Snow Entomological Collection: two males, two females, Mahabaleshwar, Satara Dist. India, 4200', V-13 to 16-12, F. H. Gravely.

Comparative notes.—This species is closely related to *Anisops nigrolineata* Lundblad and differs from it in not having its interocular space swollen and extending beyond the margin of the eyes.

Data on distribution:

INDIA

Kumaun, W. Himalayas, Nauhuchia Tal, 4200, V-5-11, S. W. Kemp, one female (F. H. Snow Coll.).

Coimbatore, one male, one female (F. H. Snow Coll.).

Anisops nigrolineata Lundblad

Pl. XLVII, fig. 56; Pl. LVII, fig. 105)

1933. *Anisops nigrolineata* Lundblad, Arch. für Hydrob., Suppl. vol. XII, pp. 145, 160-163, fig. 55.

Size.—Males, length 5.4 mm.-6.3 mm., greatest body width 1.5 mm.-1.8 mm.; females, length 5.4 mm.-6.6 mm., greatest body width 1.5 mm.-1.8 mm.

Shape.—Fusiform species with greatest body width at apical third of body.

Color.—*Dark form:* General facies black. Eyes brown. Vertex pronotum testaceous with the latter irregularly hyaline and such areas appear black as they overlie the black scutellum. Scutellum black, may be testaceous on the apical half. Hemelytra hyaline and appear black as it overlies the black dorsal body surface. Legs dark brown. Abdominal venter black with keel and segmental margins of the connexivum brown. *Pale form:* General facies pearlaceous. Eyes brown. Legs stramineous. Abdominal venter black or dark brown with keel and segmental margins of the connexivum pearlaceous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the vertex extending beyond the anterior margins of the eyes; greatest width of the head nine tenths the pronotal humeral width and four to five times the anterior width of the vertex; synthlipsis wide, one half the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one third the length of the pronotum. Pronotum long; humeral width one and two fifths the median length; lateral margins diverging and slightly more than one third the median length; posterior margin convex, medianly emarginate; dorsal surface with a median longitudi-

dinal ridge and a convexly curved longitudinal ridge on each side, midway between the median line and the lateral margin. Facial tubercle flat and spread out laterally. Viewed laterally the interocular space protrudes beyond the margins of the eyes from midway the dorsal length to the base of the labrum; flattened on its outer surface. Labrum greatly reduced in length; basal width slightly more than twice its median length; apex rounded. Rostral prong (Pl. LVII, fig. 105) slightly shorter than the third rostral segment; apex truncate. Stridulatory comb (Pl. XLVII, fig. 56b) of approximately twenty-two teeth, the apical fourteen slender and long, more than twice the length of the basal eight. Chaetotaxy of the front leg as shown on Plate XLVII. The relative length of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	78	..
Middle leg	100	58	29	24
Hind leg	100	87	30	30

Female structural characteristics.—Viewed from above, the outline of the head is rounded with the vertex extending slightly beyond the anterior margin of the eyes; greatest width of head eight to nine tenths the pronotal humeral width and four to five times the anterior width of the vertex; synthlipsis wide, almost one half the anterior width of the vertex; along the median longitudinal axis the head is one third as long as the pronotum. Pronotum long, humeral width only one and one half the median length; lateral margins diverging and slightly more than one third the median length; posterior margin almost straight, only slightly concave; dorsal surface with the same ridges as found on the males. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	126	54	35
Middle leg	100	74	37	30
Hind leg	100	85	33	34

Location of types.—Type material from Java in the Stockholm Museum.

Comparative notes.—The long pronotum of this species is also a characteristic of *A. thienemanni* Lundblad, another species from Java. However, the pronotum of the males of the latter species has its lateral margins almost parallel whereas in *A. nigrolineata* the pronotal lateral margins are diverging. Also the males of *A. thienemanni* lack the protruding interocular space as found on the males of

this species. For comparison of the male front legs of the two species see Plate XLVII, fig. 56a, and Plate XLVIII, fig. 63a.

Data on distribution:

BURMA

Shingbwiang, III-7-1944, Lt. L. C. Kuitert, sixteen males, twenty-one females (F. H. Snow Coll.).

Shingbwiang, XI-15-1944, Capt. L. C. Kuitert, nine males, eight females (F. H. Snow Coll.).

Myitkyina, XI-18-44, Capt. L. C. Kuitert, two males (F. H. Snow Coll.).

Myitkyina, X-3-45, Capt. L. C. Kuitert, one male, (F. H. Snow Coll.).

Myitkyina, V-29-45, Capt. L. C. Kuitert, one female (F. H. Snow Coll.).

Myitkyina, IX-30-45, B. McDermott, two males (F. H. Snow Coll.). Burma, 1944, L. C. Kuitert, one male, two females (F. H. Snow Coll.).

INDIA

Baluchistan, Quetta, 5700', pond in residence garden, Sta. 3, XI-10, B. S. six males, eleven females (Indian Museum).

Central Province, Puchapur, III-4-19, C. P. and F. H. G., one male, one female (Indian Museum).

Ratnagiri Dist. 400', pophil, Vashishti, V-1st to 2nd-12, F. H. Gravely, four males (Indian Museum).

Ratnagiri Dist., 0-300', Chiplum Vashishti, V-3rd to 5th-12, F. H. Gravely, two males (Indian Museum).

Satara Dist., Nechal, W. Ghats, IV-30-12, F. H. Gravely, one male, two females (Indian Museum).

Satara Dist., Medha Yanna Valley, 2200', IV-17th to 23rd-12, F. H. Gravely, three males, four females (Indian Museum).

Satara Dist., Relvak, Koyna Valley, 2000', IV-28th to 30th-12, F. H. Gravely, one female (Indian Museum).

Bengal, Rangamati, Chittagong Hill Tracts, VII-11th to 16th-15, R. Hodgard, three males, three females (Indian Museum).

S. India, Coimbatore, II-14-13, four males (Bueno Coll. of F. H. Snow Coll.).

Kumaun, W. Himalayas, Sat. Tal., 4500', V-9 to 10-11, S. W. Kemp, one male (F. H. Snow Coll.).

SIBUYAN ISLAND

Sibuyan Isl. Baker, one male, one female (U. S. Nat. Mus.).

Anisops assimilis White

(Pl. XLVIII, fig. 61)

1878. *Anisops assimilis* White, Entomologists Month. Mag., vol. XV, p. 161.

1897. *Anisops assimilis*, Hutton, Trans. New Zealand Inst., vol. XXX, p. 180.

1904. *Anisops assimilis*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 112, 132.

1908. *Anisops assimilis* Kirkaldy, Trans. New Zealand Inst., vol. XLI, p. 27 (a check list of Hemiptera of Maorian subregion).

1926. *Anisops assimilis*, Myers, Trans. New Zealand Inst., vol. 56, pp. 468-469.

1928. *Anisops assimilis*, Esaki, Insects of Samoa, vol. II, p. 79.

1933. *Anisops assimilis*, Lundblad, Arch. für Hydrob., Suppl. vol. XII, pp. 145, 173-174, text fig. 63 (compared with *Anisops thienemanni* Lundblad).

Size.—Males, length 6.6 mm., greatest body width 1.8 mm., fe-

males, length 6.3 mm.-7.8 mm., greatest width of body 1.7 mm.-2.1 mm.

Shape.—Robust, only slightly fusiform species with lateral margins in the anterior half of the body almost parallel-sided and converging in posterior half.

Color.—General facies stramineous. Eyes brown. Posterior half of hemelytra may be hyaline and appear darker as it overlies the dark brown dorsal surface of the abdomen. Legs stramineous. Abdominal venter black or dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—As viewed from above, the outline of the head is rounded with its greatest width equal to the pronotal humeral width and six times the anterior width of the vertex; synthlipsis wide, approximately four fifths the anterior width of the vertex; along the median longitudinal axis the head is less than half the length of the pronotum. Pronotum with its median length three fourths the humeral width; pronotal lateral margins diverging; posterior margin convex, medianly emarginate. Facial tubercle slightly swollen and raised. Labrum arched along median longitudinal line; basal width equal to median length; apex acuminate. Rostral prong (Pl. XLVIII, fig. 61b) with its apex acuminate and its length equal to the length of the posterior margin of the third rostral segment. Anterior leg with dorsal and ventral femoral margins sub-parallel only slightly converging for the basal three fourths of their lengths, apex rounded. Stridulatory comb (Pl. XLVIII, fig. 61c) of approximately twenty-eight teeth, the basal fourteen teeth twice as long as the apical fourteen, with an abrupt decrease in length between the two groups. Chaetotaxy of the male front leg as shown on Plate XLVIII, fig. 61a. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	116

Unfortunately, the single male specimen that I had for study was rather mutilated, possessing only the femur and tibia of the right fore leg.

Female structural characteristics.—As viewed from above, the outline of the head is rounded with its greatest width nine tenths the pronotal humeral width and four times the anterior width of the vertex; synthlipsis wide, four fifths the anterior width of the vertex; along the median longitudinal axis the head is slightly less than one half the length of the pronotum. Pronotum with its

humeral width slightly less than twice its median length; lateral margins diverging, posterior margin convex, medianly emarginate. The relative length of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	100	62	31
Middle leg	100	80	40	25

Unfortunately I had no specimens which had a complete hind leg.

Location of types.—Type material studied by White is in the Perth Museum, Scotland.

Comparative notes.—By its shape, size and structural characteristics this species appears quite closely related to *Anisops thienemanni* Lundblad. *A. assimilis*, however, possesses a more globose head which is equal to the pronotum in width, whereas in *A. thienemanni*, the width of the head is less than that of the pronotum. For comparison of the chaetatoxy of the male front legs see Plate XLVIII, fig. 61a and Plate XLVIII, fig. 63a.

Data on distribution:

NEW ZEALAND

Queenstown, 1875, Hutton, one male, three females (F. H. Snow Coll.).
Silver Stream, 1-14-22, J. C. Myers, four females (F. H. Snow Coll.).

Anisops thienemanni Lundblad

(Pl. XLVIII, fig. 63)

1933. *Anisops thienemanni* Lundblad, Arch. für Hydrob., Suppl. vol. XII, pp. 167-168, text fig. 57.

Referring to this species, also:

1923. *Anisops hyperion*, Hale, South Australian Nat., vol. IV, no. 3, pp. 124-128, text fig. 1, (determined in error).

1923. *Anisops hyperion*, Hale, Rec. South Australian Mus., vol. II, no. 3, pp. 403-412, text fig. 365 (determined in error).

1924. *Anisops hyperion*, Hale, The South Australian Nat., vol. V, no. 4, p. 135 (determined in error).

1930. *Anisops hyperion*, Hutchinson, Proc. Zool. Soc. London, vol. XXIX, p. 145, text fig. 2 (determined in error).

1935. *Anisops hyperion*, Hale, Trans. Royal Soc. South Australia, vol. XIX, p. 249 (determined in error).

Size.—Males, length 6.0 mm.-7.2 mm., greatest body width, 1.6 mm.-2.1 mm.; females, length, 6.0 mm.-6.9 mm., greatest body width 1.8 mm.-1.9 mm.

Shape.—Robust species, anterior half with lateral margins almost parallel, lateral margins converging in posterior half.

Color.—General facies testaceous. Eyes brown. Anterior margin of pronotum may be tinged with orange; may be hyaline on pos-

terior and appear the black color of the underlying anterior margin of the scutellum. Scutellum may be tinged with orange. Hemelytra hyaline and appear black or testaceous depending on the color of the underlying dorsal body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the head is short and broad; outline rounded; greatest width of head almost equal to the pronotal humeral width and four and one half times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is one third or less the length of the pronotum. Pronotum long; its humeral width only one and two fifths the median length; lateral margins almost parallel, only slightly diverging and about one half the median length; posterior margin almost straight, medianly emarginate. Facial tubercle only slightly raised. Labrum long, with its median length slightly more than its basal width; apex more or less acuminate. Rostral prong (Pl. XLVIII, fig. 63b) shorter than the third rostral segment; apex acuminate. Anterior femur with dorsal and ventral margins almost parallel for the basal three fourths of their length; dorsal margin curved in apical fourth; apical fifth of inner surface with a curved ridge extending from dorsal margin to almost midway the width. Stridulatory comb (Pl. XLVIII, fig. 63c) of approximately twenty-four to thirty-four teeth. Chaetotaxy of male front leg as shown on Plate XLVIII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	113	74	..
Middle leg	100	75	32	18
Hind leg	100	78	31	31

Female structural characteristics.—Viewed from above, the outline of the head is rounded with the vertex extending slightly beyond the anterior margins of the eyes; greatest width almost nine tenths the pronotal humeral width and four times the anterior width of the vertex; synthlipsis wide, slightly more than one half the anterior width of the vertex; along the median longitudinal axis the head is almost one half the length of the pronotum. Pronotum with its humeral width less than twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	128	63	31
Middle leg	100	77	38	23
Hind leg	100	84	32	32

Location of types.—Type material from Diengplateau, Java in the Stockholm Museum.

Comparative notes.—*A. thienemanni* is very closely related to *Anisops assimilis* White, from which it can be separated only on the basis of the males. The head of the male of *A. assimilis* is wider than or at least equal to the pronotal humeral width, whereas in *A. thienemanni* the head of the male is not as wide as pronotal humeral width and the eyes are not as voluminous as in the case of the male *A. assimilis*.

Data on distribution:

AUSTRALIA

New South Wales, Began River, F. Armstrong, via Mr. Deane, eight males, four females (F. H. Snow Coll.).

New South Wales, Imperial Dam, nr. Broken Hill, Fred W. Shepherd, one male, one female (F. H. Snow Coll.).

New South Wales, Imperial Dam, XII-30-1925, F. W. Shepherd, three males, five females (F. H. Snow Coll.).

New South Wales, Concobolin, X-17-'00, three males, two females (Dept. of Agric., N. S. W., Austral.).

Broken Hill, XI-3-43, Chadwick, one male (Dept. of Agric., N. S. W., Austral.).

Broken Hill, in nine mile dam, III-12-44, C. E. Chadwick, two females, one male (Dept. of Agric., N. S. W., Austral.).

Broken Hill, in nine mile dam, IV-23-44, C. E. Chadwick, one male, two females (Dept. of Agric., N. S. W., Austral.).

Broken Hill, III-30-44, C. E. Chadwick (Dept. of Agric., N. S. W., Austral.).

New South Wales, Effing, Sydney, XII-27, Harv. Austral. Exped. Darling-
ton, one female (Harv. Mus. Comp. Zool.).

West Australia, Wiluna, Lake Violet, four males, nine females (Harv. Mus. Comp. Zool.).

West Australia, Rottnest Isl., Oct. '24, Harv. Austral. Exped. P. J. Darling-
ton, two males, nine females (Harv. Mus. Comp. Zool.).

West Australia, Wiluna, Oct. I, 1931, Harv. Austral. Exped., P. J. Darling-
ton, one male, four females (Harv. Mus. Comp. Zool.).

West Australia, Mullewa, Sept. 13, 1931, Harv. Austral. Exped., P. J. Dar-
lington, two females (Harv. Mus. Comp. Zool.).

West Australia, Geraldton, Oct. II, Harv. Austral. Exped., P. J. Darlington,
three females (Harv. Mus. Comp. Zool.).

Adelaide, H. M. Hale, ten males, twelve females (F. H. Snow Coll.).

Swamp near Camberra, III-'32, J. Evans, one male (F. H. Snow Coll.).

South Australia, Port Willunga, H. M. Hale, four males, four females
(F. H. Snow Coll.).

South Australia, Adelaide, Nov. '30, Harv. Austral. Exped., P. J. Darlington, one male, one female (Harv. Mus. Comp. Zool.).

South Australia, one female (Harv. Mus. Comp. Zool.).

East Australia, one female (Harv. Mus. Comp. Zool.).

TASMANIA

Tasmania, Hobart, IV-1939, two males, nine females, J. W. Evans (F. H. Snow Coll.).

Anisops nasuta Fieber

(Pl. XLVIII, fig. 60; Pl. LV, fig. 98)

1851. *Anisops nasuta* Fieber, Abhandl. Konigl. bohm. Ges. Wiss., vol. V, pt. 7, pp. 484-485 (Fieber believed this species to be *A. nivea* Fabr.; but he simultaneously named it *A. nasuta* in parenthesis).

1905. *Anisops nasutus*, Breddin, Societas Entomologica, vol. XVII, pp. 153-154.

1933. *Anisops nasuta*, Lundblad, Arch. für Hydrob., Suppl. Vol XII, pp. 145, 168-171, text fig. 58.

1941. *Anisops nasuta*, Hoffmann, Lingnan Sci. Jour., vol. XX, pp. 59-60 (catalogue).

Referring to this species, also:

1901. *Anisops fieberi*, Kirkaldy, The Entomologist, vol. XXXIV, p. 5.

1901. *Anisops fieberi*, Breddin, Abhandl. Nat. Ges. Halle, vol. XXIV, p. 103, (ecological note).

1904. *Anisops fieberi*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 116, 132.

1906. *Anisops fieberi*, Distant, Fauna of British India, Rhynchota, III, p. 46.

1923. *Anisops fieberi*, Hale, Rec. South Australian Mus., vol. II, no. 3, pp. 400-401, text fig. 363.

1925. *Anisops fieberi*, Hale, Arch. Zool. utgivet av K. Svenska Vetensk., vol. XVII, no. 26, p. 17 (ecological note).

1926. *Anisops fieberi*, Esaki, Ann. Mus. Nat. Hungarici, vol. XXIV, p. 188 (*A. niveus* Matsumura (nec. Fabricius) and *Anisops Kuroiwae* Matsumura synonymized here). (Ecological note also.)

1928. *Anisops fieberi*, Esaki, Insects of Samoa, pt. II, pp. 76-77.

1931. *Anisops fieberi*, China, Jour. Federated Malay states, vol. VIII, p. 261.

1933. *Anisops fieberi*, Wu, Lingnan Sci. Jour., vol. XII, p. 213 (catalogue).

1933. *Anisops fieberi*, Hoffmann, Lingnan Sci. Jour., vol. XII, p. 256 (catalogue).

1935. *Anisops fieberi*, Wu, Catalogue Insectorum Sinensium, vol. II, pp. 575-576.

1905. *Anisops niveus*, (nec. Fabr.) Matsumura, Trans. Sappora Nat. Hist. Soc., vol. I, p. 28.

1915. *Anisops niveus*, (nec. Fabr.) Esaki, Ent. Mag., Kyoto, vol. I, p. 31.

1915. *Anisops Kuroiwae*, Matsumura, Ent. Mag., Kyoto, vol. I, p. 109.

1928. *Anisops nasuta*, Dover, Treubia, vol. X, p. 71 (determined in error).

1928. *Anisops fieberi*, Jaczewski, Ann. Mus. Zool. Polonici, vol. VII, p. 113, Plate XVI, figs. 18, 19, 20, 21 (determined in error, actually *A. genji* Hutcheson).

1915. *Anisops niveus* var. *ogasawarensis*, Matsumura, Ent. Mag., Kyoto, vol. I, pt. 3, p. 109.

1930. *Anisops ogasawarensis*, Esaki, Bull. Biogeog. Soc. Japan, vol. I, no. 3, p. 214.

1933. *Anisops ogasawarensis*, Lundblad, Arch. für Hydrob., Suppl. vol. XII, p. 145 (list of Indo-australian and Pacific forms of this genus).

Size.—Males, length 6.0 mm.-7.8 mm., greatest body width 1.5 mm.-1.8 mm.; females, length, 6.0- mm.-6.9 mm., greatest body width 1.4 mm.-1.9 mm.

Shape.—Slightly fusiform species; greatest width of the body about midway the body length.

Color.—General facies stramineous or pearlaceous. Eyes brown. Scutellum may be tinged with orange. Legs stramineous. Ab-

dominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the vertex extending beyond the anterior margins of the eyes; greatest width of the head nine tenths the pronotal humeral width and slightly more than four times the anterior width of the vertex; synthlipsis narrow, less than one third the anterior width of the vertex; along the median longitudinal axis the head is seven tenths the length of the pronotum. Pronotum with its humeral width twice its median length; lateral margins slightly diverging and three fifths the median length; posterior margin convex, medianly emarginate. Frons produced anteriorly into a short cephalic horn; apex of projection with a median oval depression, bordered laterally by a carina on each side; facial tubercle with a median depression. Labrum short and broad; basal width one and one half times the median length; apex broad and rounded; base provided with a few long hairs which extend almost the full length of the labrum. Rostral prong (Pl. LV, fig. 98) shorter than the third rostral segment; apex acuminate. Stridulatory comb (Pl. XLVIII, fig. 60b) of approximately fourteen teeth which increase in length toward the middle. Chaetotaxy of the male front legs as shown on Plate XLVIII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	102	58	..
Middle leg	100	81	34	24
Hind leg	100	81	29	29

Female structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width of the head nine tenths the pronotal humeral width and five times the anterior width of the vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along the median longitudinal axis the head is one half as long as the pronotum. Pronotum with humeral width slightly more than twice its median length; lateral margins diverging and one half or more the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	118	42	31
Middle leg	100	82	35	25
Hind leg	100	87	31	31

Location of types.—Fieber's type material was placed in the Berlin Museum. Lundblad (32) makes no mention of the location of the type and Dr. H. B. Hungerford, who, while in Europe in 1928, recorded the location of many types of Anisops species, does not note it as being in the Berlin Museum.

Comparative notes.—This species is superficially similar to *A. batillifrons* Lundblad. However, the cephalic projection of the males is not excavate for its entire length as in *A. batillifrons* and the apex of the projection is not bordered by a raised carina as in the case of the latter. Also the males lack the peculiarly curved middle tarsal claws as found in *A. batillifrons*.

Data on distribution:

NEW GUINEA

Port Moresby, Guigno, 1889, L. Loria, eight males, seventeen females, Kirkaldy Collection (F. H. Snow Coll.).

Erima Astrolobe B. '97, Biro, one female, Kirkaldy Collection (F. H. Snow Coll.).

Rigo, Luglio, 1889, L. Loria, seven males, ten females, Kirkaldy Collection (F. H. Snow Coll.).

CELEBES

Lahendong, two males, one female (Basal Nat. Mus., Switzerland).

FRIENDLY ISLANDS

Niva Pou Island, 1930, Lt. H. C. Kellers, M. C., seven males, one female (U. S. Nat. Mus.).

AUSTRALIA

N. Queensland, Barren River nr. Barren Waters, IX-28-38, R. G. Wind, nine males, ten females (F. H. Snow Coll.).

Darwin, one male, one female (F. H. Snow Coll.).

Moore Id., Feb. 20, 1945, B. Malkin, eight males, nineteen females (U. S. Nat. Mus.).

Townsville, Jan. 9, 1945, B. Malkin, two males, two females (U. S. Nat. Mus.).

GUAM

Guam, J. B. Thompson, one male (F. H. Snow Coll.).

Anisops cavifrons n. sp.

(Pl. I, fig. 73)

Size.—Males, length 5.1 mm.-5.7 mm., greatest body width 1.3 mm.-1.6 mm.; females length 5.4 mm.-6.0 mm., greatest body width 1.5 mm.-1.8 mm.

Shape.—Fusiform species, greatest body width about midway the body length.

Color.—General facies pearlaceous, hemelytra hyaline and ap-

pearing gray as it overlies the dark dorsal body surface. Legs testaceous. Abdominal venter dark brown with keel and segmental margins of the connexivum testaceous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with vertex projecting beyond the anterior margins of the eyes; greatest width of the head eight to nine tenths the pronotal humeral width and slightly more than four times the anterior width of the vertex; synthlipsis narrow, one fourth to one fifth the anterior width of the vertex; along median longitudinal axis head approximately three fifths as long as pronotum. Pronotum with humeral width slightly less than twice its median length; lateral margins diverging and more than one half the median length; posterior margin convex, medianly emarginate. Frons triangularly excavate; apex rounded; bordered on each side by two carinae, the inner meet in the apical sixth of the frons to form a median commissure. Labrum short; basal width one and three fourths the median length; apex broad and rounded. Rostral prong (Pl. L, fig. 73b) as long as the third rostral segment; apex acuminate. Stridulatory comb (Pl. L, fig. 73c) of approximately fourteen teeth which decrease in height from base to apex. Basal third of posterior margin of fore tibia with a large procumbent spine which curves medianly on dorsal surface. Tarsal claws of male middle leg curved strongly inward at base; posterior claw thicker than anterior one. Chaetotaxy of the front leg as shown on Plate L. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	107	71	..
Middle leg	100	82	36	32
Hind leg	100	74	30	30

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width nine tenths the pronotal humeral width, four to five times the anterior width of vertex; synthlipsis wide, slightly more than one third the anterior width of the vertex; along median longitudinal axis head more than one half the pronotal length. Pronotum with humeral width twice the median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	51	31
Middle leg	100	82	41	27
Hind leg	100	80	33	30

Location of types.—Male holotype, female allotype, twenty-three male and eighty-six female paratypes, Lahori, India, Temple tank, I-8-19, in the Indian Museum at Calcutta. Other paratypes are as follows: In the Indian Museum: two males, ten females, Salt Range, Punjab, India, Sta. 13, VII-29, S. L. Hora; one male, Puenjukara Isl. Cochin backwater nr. Ernakulane, F. H. Gravely; three males, four females, Kandaghat, Simla Hills, VIII-25, B. Chopra; six males, seven females, Marihan, Village Tank, XII-30-12, Resee; three males, nine females, Bannu; seven males, six females, Madhupur, Bengal, X-16-09, C. Paiva; one male, two females, Ratnagiri Dist. Chiplum, Vashishti V. O"-300", V-3 to 5-12, F. H. Gravely. In the Snow Entomological Collection twenty-five males, twenty-five females, Lahori, Temple tank, I-8-19. In Lutz collection: two males and two females, Cantonment Dehra Dun, U. P. India, V-10-1946, Jai L. Uniyal.

Comparative notes.—This species is very closely related to *Anisops batillifrons* Lundblad and appears identical to it in almost every superficial detail. However, the basal third of the posterior margin of the male fore tibia of *A. batillifrons* lacks the large procumbent spine as found on *A. cavifrons*. For comparison of the chaetotaxies of the front legs of the males see Plate L, fig. 73a and Plate L, fig. 71a.

Data on distribution:

INDIA

Simla Hills, Ghuma (Ponds), 3700', IX-6 to 8-1925, B. Chopra, four males, sixteen females (F. H. Snow Coll.).

Kandaghat, Simla Hills, ponds, 3500' to 4600', Sta. 2, VIII-25, B. Chopra, one male, seven females (F. H. Snow Coll.).

Br. India, Coimbatore, L. V. Newton, S. J., nine males, nineteen females (Bueno Coll. of F. H. Snow Coll.).

Br. India, Pulney, L. V. Newton, S. J., one male (Bueno Coll. of F. H. Snow Coll.).

Inde, Darjeeling, le Moul, one male (Bueno Coll. of F. H. Snow Coll.).

Anisops batillifrons Lundblad

(Pl. L, fig. 71; Pl. LVI, fig. 101)

1933. *Anisops batillifrons* Lundblad, Ann. Mag. Nat. Hist., vol. XII, ser. 10, pp. 463-464, text fig. 8.

1935. *Anisops batillifrons*, Wu, Catalogus Insectorum Sinensium, vol. 2, p. 576.

1941. *Anisops batillifrons*, Hoffmann, Lingnan Sci. Jour., vol. 20, p. 59 (catalogue).

Size.—Males, length 5.6 mm.-6.4 mm., greatest body width 1.5 mm.-1.6 mm.; females, length 5.4 mm.-6.3 mm., greatest body width 1.3 mm.-1.8 mm.

Shape.—Fusiform species; greatest body width about two fifths the body length.

Color.—General facies pale, stramineous or gray. Eyes brown. Hemelytra hyaline and appearing stramineous or gray depending on the color of the underlying body surface. Legs stramineous. Abdominal venter dark brown or black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the lateral outline of the head is rounded with the vertex extending beyond the anterior margins of the eyes to form a short cephalic horn; greatest width of the head nine tenths the pronotal humeral width and slightly less than four times the anterior width of the vertex; synthlipsis narrow, less than one fourth the anterior width of the vertex; along the median longitudinal axis the head is approximately three fifths as long as the pronotum. Pronotum with its humeral width slightly less than twice its median length; lateral margins diverging and more than one half the median length; posterior margin convex, medianly emarginate. Frons triangularly excavate; apex rounded; bordered on each side by two carinae, the inner two meet in the apical sixth of the frons to form a median commissure. Labrum short; basal width one and three fourths the median length; apex broad and rounded. Rostral prong (Pl. LVI, fig. 101) slightly longer than the third rostral segment; apex acuminate. Stridulatory comb (Pl. L, fig. 71b) of approximately thirteen teeth, the basal six much longer than the apical seven. Middle tarsal claws strongly curved inward at base, the posterior claw much thicker than the anterior one. Chaetotaxy of the male front leg as shown on Plate L. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	114	68	..
Middle leg	100	81	39	20
Hind leg	100	82	35	36

Female structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width of the head nine tenths the pronotal humeral width and four to five times the anterior width of the vertex; synthlipsis wide, slightly less than one third the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the pronotal length. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and slightly more than

one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	123	54	34
Middle leg	100	90	45	30
Hind leg	100	76	34	32

Location of types.—Type material from Foochow, China in the Stockholm Museum.

Comparative notes.—This species is very closely related to *Anisops bouvieri* Kirkaldy and the females of the two are indistinguishable. However, a study of the males will afford ready separation. The cephalic horn of *Anisops bouvieri* is acuminate at the apex and extends one fifth its ventral length beyond the anterior margins of the eyes, whereas in this species the apex of the cephalic horn is rounded at the apex and extends only one twelfth its ventral length beyond the anterior margins of the eyes. Also the males of *A. batillifrons* lack the three tufts of labral hairs as found on *A. bouvieri*.

Data on distribution:

FORMOSA

Rokki, VI-17-34, L. Gressitt, one male, one female (F. H. Snow Coll.).

Rokki, V-20-34, L. Gressitt, ten males, ten females (F. H. Snow Coll.).

Taihoku, IX-9-22, R. Takahashi, nine females (Buena Coll. of F. H. Snow Coll.).

Formosa, three males, ten females (Buena Coll. of F. H. Snow Coll.).

Heito, V-11-34, L. Gressitt, one male, two females (F. H. Snow Coll.).

Yantempo, V-26-07, two females (F. H. Snow Coll.).

IRIOMOTE ISLAND

Iriomote Isd., VIII-25-34, L. Gressitt, one female (F. H. Snow Coll.).

HAINAN ISLAND

Fan Ta, VI-4-35, L. Gressitt (F. H. Snow Coll.).

BURMA

Myitkyina, III-31-45, L. C. Kuitert, two males, eight females (F. H. Snow Coll.).

Myitkyina, XII-18-44, L. C. Kuitert, one female (F. H. Snow Coll.).

Myitkyina, IX-30-45, B. McDermott, one male (F. H. Snow Coll.).

Shingbwiayang, VIII-14-44, L. C. Kuitert, ten males, twenty-three females (F. H. Snow Coll.).

Shingbwiayang, VIII-17-44, L. C. Kuitert, one male (F. H. Snow Coll.).

Rangoon, Churchill Rd. Miss Northop, one male (U. S. Nat. Mus.).

ASSAM

Ledo, VII-3-44, L. C. Kuitert, six males, four females (F. H. Snow Coll.).

Tinsukia, IV-9-44, D. E. Hardy, ten males, twelve females (F. H. Snow Coll.).

Margaldal, Mozbat, I-4-11, S. W. Kemp, four males, nine females (F. H. Snow Coll.).

INDIA

Darjeeling Dist. Sitong Ridge, 4700', E. Himalayas, three males, six females, N. A. and F. G. (Indian Museum).

Darjeeling Dist. Mongpoo pond, 4000', E. Himalayas, two males, three females, N. A. and F. G. (Indian Museum).

PHILIPPINE ISLANDS

Bacoor, P. L. Stang, one female (F. H. Snow Coll.).

Mindanao, Dapitan, Baker, three males, nine females (U. S. Nat. Mus.).

Laguna de Bay, VIII-19-1936, two males (Usinger Coll.).

OKINAWA ISLAND

Okinawa Id., Aug. 18, 1945, W. D. Fields (U. S. Nat. Mus.).

Anisops sardea Herrich-Shaffer

(Pl. XLIX, fig. 64; Pl. LVI, fig. 102)

1850. *Anisops sardeus* Herrich-Shaffer, Die Wanzenartigen Insecten, vol. IX, p. 41, fig. 294.
 *1870. *Anisops sardcus*, Palumbo, Mina, Bibl. Natur. Sicil. Ent., vol. VII, p. 16.
 1879. *Anisops sardeus*, Berg, Hemiptera Argentina, p. 119 (*A. sardeus* appears identical with *A. productus* Fieb. to him).
 1904. *Anisops sardea*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 114-116, 132.
 1906. *Anisops sardeus*, Distant, Fauna of British India, Rhynchota, vol. III; pp. 40-41, text fig. 27 (ecological note).
 1918. *Anisops sardeus*, Paiva, Rec. Indian Mus., vol. XIV, p. 28 (ecological note).
 1925. *Anisops sardea*, Hesse, Ann. South African Mus., vol. XXIII, p. 137 (catalogue).
 1926. *Anisops sardea*, Jaczewski, Ann. Zool. Mus. Polonici Hist. Nat., vol. V, p. 83, 83-86, text figs. 34, 35, 36, 37.
 1927. *Anisops sardeus*, Dover, Jour. Bombay Nat. Hist. Soc., vol. XXXII, p. 615 (ecological note).
 1928. *Anisops sardea*, Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. I, p. 164 (ecological note).
 1929. *Anisops sardeus*, Poisson, Bull. Soc. Hist. Nat. Afrique du Nord, vol. XX, p. 87 (ecological note).
 1929. *Anisops sardea*, Hutchinson, Ann. South African Mus., vol. XXV, pt. 3, pp. 381-384, Pl. XXIX, fig. 13; Pl. XXX, figs. 7, 8, 9.
 1930. *Anisops sardea*, Hutchinson, Proc. Zool. Soc. London, vol. XXIX, pt. 2, p. 445 (ecological note).
 1930. *Anisops sardea*, Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. VI, p. 57 (ecological note).
 1933. *Anisops sardea*, Hutchinson, Internat. ges. Hydrob. und Hydrog., vol. 28, pt. 5/6, pp. 452, 460 (ecological notes).
 1933. *Anisops sardea*, Jaczewski, Linnean Soc. Jour., Zool., vol. XXXVIII, p. 343 (ecological note).
 1934. *Anisops sardea*, Jaczewski, Ann. Mus. Zool. Polonici, vol. X, no. 14, p. 280 (ecological note).
 1934. *Anisops sardea*, Poisson, Memoires Soc. Hist. Nat. Afrique du Nord, vol. XXV, p. 134 (ecological note).
 1935. *Anisops sardea sardea*, Poisson, Mus. Nat. Hist. Nat., vol. III, pp. 208-209, text figs. 22B, 23A, 24B.

* Reference not seen by me.

1935. *Anisops sardea madagascarensis*, Poisson. (*loc. cit.*) pp. 2091210, text figs. 22A, 23B, 24B. (I have raised this to specific level.)

1936. *Anisops sardea*, Jaczewski, Ann. Mus. Zool. Polonici, vol. XI, pp. 186-187 (ecological note).

1939. *Anisops sardea sardea*, Poisson, Bull. Soc. Ent. France, vol. 44, p. 43 (ecological note).

1941. *Anisops sardea sardea*, Poisson, Rev. Francaise Ent., vol. VIII, p. 77 (ecological note).

Referring to this species also:†

1840. *Anisops nivea*, Spinola, Essais sur Hemipteres, p. 60 (determined in error).

1840. *Anisops nivea*, Rambur, Faune Entomologique de l'Andalouse, vol. 2, no. 5, pp. 190-191 (determined in error).

1843. *Anisops nivea*, Amyot and Serville, Hemipteres, p. 454, Pl. VIII, fig. 8 (determined in error).

1848. *Anisops nivea*, Costa, Atti Reale Inst. Incorag. Alle Sci. Nat. Napoli, vol. III, p. 148 (determined in error).

1848. *Anisops nivea*, Amyot, Entomologie Francaise, Rhynchota, p. 338 (determined in error).

1855. *Anisops natalensis*, Stål, Ofversigt Kongl. Vetensk. Akad. Forhand., vol. XII, p. 89 (determined in error).

1851. *Anisops productus*, Fieber, Abhandl. Bohm. Ges. Wiss., vol. V, pt. 7, p. 484.

1860. *Anisops productus*, Fieber, Die Europaische Hemiptera, p. 100.

1862. *Anisops productus*, Schawn, Peter's Reise nach Mossambique, V, p. 51.

1865. *Anisops productus*, Stål, Hemiptera Africana III, p. 191.

*1872. *Anisops productus*, Marshall, Ent. Month. Mag., vol. VIII, p. 191.

1873. *Anisops producta*, Gerstaecker, Decken Reise's in Ost Africa III, no. 2, p. 425.

1878. *Anisops producta*, Horvath, Entomologische Nachrichten, vol. IV, p. 174.

*1880. *Anisops producta*, Puton, Synopsis des Heteropteres de France, p. 217.

1886. *Anisops producta*, Puton, Exploration Scientifique de la Tunisie, p. 8 (ecological note).

1892. *Anisops producta*, De Carlini, Ann. Mus. Civ. Storia Nat. Genova, vol. XII (XXXII), p. 11 (ecological note).

1893. *Anisops producta*, Noualhier, Ann. Soc. Ent. France, vol. LXII, p. 17 (ecological note).

1899. *Anisops producta*, Kirkaldy, Ann. Soc. Ent. France, vol. LXVIII, p. 106 (ecological note).

1883. *Anisops producta*, Lethierry, Ann. Mus. Civ. Storia Nat. Genova, vol. XVIII, p. 2 (ecological note).

1892. *Anisops producta*, Liethierry, Bull. Soc. Ent. France, vol. XVII, p. 208 (ecological note).

*1894. *Anisops producta*, Giglia-Tos, Boll. Mus. Zool. Anat. Comp., vol. IX, p. 11.

1905. *Anisops producta*, Breddin, Mitt. Naturh. Mus., vol. XXII, pp. 153-154.

1919. *Anisops producta*, Hungerford, Kansas Sci. Bull., vol. XXI, p. 176.

1922. *Anisops producta*, Lindberg, Notulae Entomologicae, vol. II, pp. 47-48, text figs. 5, 6.

1926. *Anisops producta*, Poisson, Acad. Sci. Paris, vol. 181, p. 684.

1926. *Anisops producta*, Poisson, Arch. Zool. Exper. Gen., vol. 65, pt. 4, pp. 181-208, text figs. I-XVII (bionomics).

1926. *Anisops producta*, Poisson, Bull. Soc. Hist. Nat. Afrique du Nord, vol. XXII, p. 269 (ecological note).

1936. *Anisops producta*, Lindberg, Soc. Scient. Fennica Comment. Biol., vol. VI, no. 7, pp. 41-42 (ecological note).

* Reference not seen by me.

† The following reference as noted by Kirkaldy in 1904 (30) was unavailable: ? *N. alba* Forskal, Decr. Anim. Orient, p. XXIII. The name *A. compressa* as noted by Herrich-Shaffer and Kirkaldy (30) evidently is a manuscript name, for there is no reference to it in the literature.

Size.—Males, length 7.5 mm.-8.4 mm., greatest body width 1.8 mm.-1.9 mm.; females, length 7.2 mm.-7.5 mm., greatest body width 1.9 mm.-2.0 mm.

Shape.—Subfusiform species; greatest body width about midway the length of the body.

Color.—General facies stramineous or testaceous. Eyes brown. Hemelytra may be hyaline and appear darker due to dark brown body surface. Legs stramineous. Abdominal venter dark brown or black with keel and segmental margins of the connexivum stramineous or testaceous.

Male structural characteristics.—Viewed from above, the interocular space is produced anteriorly into a prominent cephalic horn with its apex acuminate; lateral margins of the head rounded; greatest width of the head nine tenths the pronotal humeral width and three times the anterior width of the vertex; synthlipsis narrow, approximately one sixth the anterior width of the vertex; along the median longitudinal axis the head is slightly more than three fourths the length of the pronotum. Pronotum with its humeral width almost twice the median length; lateral margins diverging and almost one half the median length; posterior margin convex, medianly emarginate. Frons, which forms the ventral margin of the cephalic horn, excavate for its entire length and bordered laterally by two carinae; apex more or less acuminate. Labrum short; basal width slightly more than twice the median length; apex acuminate; each basal angle bearing a tuft of erect hairs whose tips are curved medianly and meet one another, forming a loop. Rostral prong (Pl. LVI, fig. 102) slightly shorter than the third rostral segment; apex acuminate. Stridulatory comb (Pl. XLIX, fig. 64b) of approximately eighteen teeth which decrease slightly in length from base to apex. Middle tarsal claws strongly curved inward at base; posterior claw thicker than anterior claw. The chaetotaxy of the front leg as shown on Plate XLIX. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	118	72	..
Middle leg	100	83	42	20
Hind leg	100	84	30	30

Female structural characteristics.—Viewed from above, the outline of the head is rounded, with the vertex extending slightly beyond the anterior margins of the eyes; greatest width of head nine

tenths the pronotal humeral width and approximately four times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head almost as long as the pronotum. Pronotum with its humeral width twice the median length; posterior margin convex, medianly emarginate. Facial tubercle with a slight triangular depression. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	118	55	33
Middle leg	100	86	42	23
Hind leg	100	80	31	30

Location of types.—The location of the type material of *A. sardea* appears to be unknown. As it was part of Herrich-Shaffer's own collection it may be in the Berlin Museum, though Dr. H. B. Hungerford does not record it in the notonectid material he observed there in 1928.

Comparative notes.—Though somewhat larger, this species, by the presence and shape of the male cephalic projection is very similar in appearance to *A. bouvieri* Kirk. Besides being larger it is different in many other respects from Kirkaldy's species. It lacks the laterally expanded keel of the third abdominal sternite as possessed by *A. bouvieri*. *A. bouvieri* does not have the marginal row of prominent setae on the inner surface of the fore tibia of the male of *A. sardea*.

Data on distribution:

INDIA

- Baluchistan, Yakmach Cagai, XI-13-18, B. S., one male (F. H. Snow Coll.).
 Punjab, Salt Pangí, Sta. 9. S. L. Hora, two males, two females (F. H. Snow Coll.), seven males, three females (Indian Museum).
 Moriban, Village tank, XII-20-15, Resee, four females (Indian Museum).
 S. India. Chikkaballpura, T. V. Campbell, two females (F. H. Snow Coll.).
 Kuman Lakes, one female (Indian Museum).
 Bannu, one female (Indian Museum).
 Lucknow, I-22-08, Mus. Collr. R. H., one male, four females (Indian Museum).
 S. India, Coromandel, 2500' X-23-10, Mus. Collr., one male (Indian Museum).

TURKEY

- Erdemli, VIII-27-47, two males, two females (F. H. Snow Coll.).

SYRIA

- Syria, Kaifa, Reuter, exchange fr. Budapest Museum, two females (F. H. Snow Coll.).

CORFU

Corfu, J. Sahlberg, gift fr. Horvath, Kirkaldy remnant, one male, one female (F. H. Snow Coll.).

ALBANIA

Mustajebg Velipoja, one male (F. H. Snow Coll.).

AFRICA

Egypt, Dr. Tuton, one male (U. S. Nat. Mus.).

Egypt, Mariout, 1881, Letournex, two males, two females (Paris Museum).

Egypt, R. Amle, 1881, Letournex, three females (Paris Museum).

Basse Egypte, Le Caire et Env. 1907, Ch. Alluaud, one male, three females (Paris Museum).

Soudan Egyptian, Poseires, Haut Nil Bleu, Dec. 1907, Ch. Alluaud, one male, one female (Paris Museum).

Soudan, Niore, Oct. 1909, F. de Zeltner, one male (Paris Museum).

Algerie, Bone, Hgemn, one female (F. H. Snow Coll.).

Algerie, Philippville, A. They, three females, one male (Bueno Coll. of F. H. Snow Coll.).

Abessynien, one female (Bueno Coll. of F. H. Snow Coll.).

Abessynien, Dire Doana, two females (Bueno Coll. of F. H. Snow Coll.).

Cairo, four females (Bueno Coll. of F. H. Snow Coll.).

Algerie, Constantine, E. de Bergevin, one female (Paris Museum).

Morco, Si Rahal, 1913, R. Pallary, one male, one female (Paris Museum).

Moroc, Oued, Mharhar pris Bow Berein, 1903, C. Buchet, three males, three females (Paris Museum).

Moroc, Andiere, Boegel Merare, 1903, C. Buchet, one female (Paris Museum).

Tchad, N'Guigmi, 1919, Dr. Noel, one female, one male (Paris Museum).

Tchad, Mission Tihlo, 1910, Dr. Gaillard, two females (Paris Museum).

Bas Chari, Fort Lamt, Mission Chari-Tchad, Aug. 1904, Dr. J. DeCorse, three males, six females (Paris Museum).

Reg. de Zinder, Dungass, Mission Tilho, Oct. 1910, Dr. R. Guillard, five males, seven females (Paris Museum), one male, one female, Jan. 1910 (Paris Museum).

Sahel Soudanais, Goumbou, 1909, F. de Zeltner, one male, three females (Paris Museum).

Env. de Zinder, Guidimouni, Mission Tilho, Nov. 1910, Ch. Alluaud, one male, one female (Paris Museum).

Mocambique, Vallee du Pungoue, Guengere, 1906, G. Vasee, one male, three females (Paris Museum).

Kanem, Sud de Nyouri, 1904, A. Chevalier, two males (Paris Museum).

Congo Francaise, Liberville, 1898, C. Chalot, one male (Paris Museum).

Haut Oubangui, Bessou (Mission), 1904, Dr. J. DeCorse, one female (Paris Museum).

Massahori, 66 K. est du Tchad, 1904, A. Chevalier, one female (Paris Museum).

Afrique Orient. Angl. Maji-Chumi, (Wa-Nyika) 1904, Ch. Alluaud, one female (Paris Museum).

Tombouctore, 1900, A. Chevalier, one male, two females (Paris Museum).
 Abyssinia, Hora Abjata, small pond in marsh, XI-18-1926, J. Omer-Cooper,
 one female (F. H. Snow Coll.).

E. Africa, P. H. Uhler Collection (U. S. Nat. Mus.).

Tanga, Sjostedt, gift from Sweeny (Kirkaldy remnant) (F. H. Snow Coll.).

Transvaal, Klobers Dam, Setagali Dist., Mafering, Jan. 1927.

B. Lamb, gift to H. B. Hungerford fr. G. E. Hutchinson, one male, one
 female (F. H. Snow Coll.).

Kilimandjoro, Sjostedt, Natron-sjoarne, gift fr. Sweeny, one female (F. H.
 Snow Coll.).

French Sudan, Bamako, purchased fr. Dr. O. Standlinger, one male, five
 females (F. H. Snow Coll.).

Oran, E. Morrison, one male, three females (F. H. Snow Coll.).

CANARY ISLANDS

Ile de Canarias, 1897, C. Buchet, two males, two females (Paris Museum).

Islas Canarias, Tenerife, A. Cabrera, one male, six females (Bueno Coll. of
 F. H. Snow Coll.).

Tenerife, two females (Bueno Coll. of F. H. Snow Coll.).

Anisops madagascarensis Poisson

(Pl. XLIX, fig. 67)

1935. *Anisops sardea madagascarensis* Poisson, Bull. Mus. Nat. Hist. Natur., vol. III,
 pp. 208-211, text figs. 22A, 23A, 24B.

Size.—Males, length 8.1 mm.-9.0 mm., greatest body width 1.9
 mm.-2.1 mm.; females, length 7.3 mm.-7.8 mm., greatest body width
 1.9 mm.-2.1 mm.

Shape.—Subfusiform species; greatest width of the body slightly
 before midway the body length.

Color.—General facies testaceous. Eyes brown. Hemelytra may
 be hyaline and appear darker due to dark brown body surface. Legs
 stramineous. Abdominal venter dark brown, with keel and seg-
 mental margins of the connexivum stramineous. Tip of cephalic
 horn black.

Male structural characteristics.—Viewed from above, the inter-
 ocular space is produced anteriorly into a prominent cephalic horn
 with its apex acuminate; lateral margins of the head rounded;
 greatest width of the head eight tenths the pronotal humeral width
 and three times the anterior width of the vertex; synthlipsis narrow,
 one sixth the anterior width of the vertex; along the median longi-
 tudinal axis the head is three fourths the length of the pronotum.
 Pronotum with its humeral width one and two thirds the median
 length; lateral margins diverging and three fifths the median length;
 posterior margin convex, medianly emarginate. Frons, which forms

the ventral margin of the cephalic horn, excavate for its entire length and bordered laterally by two carinae; apex more or less acuminate. Labrum short; basal width slightly more than twice the median length; apex acuminate; each basal angle bearing a tuft of erect hairs which curve their tips medianly and meet one another forming a loop. Rostral prong as in *A. sardea* (Pl. LVI, fig. 102) longer than third rostral segment; apex acuminate. Stridulatory comb (Pl. XLIX, fig. 67b) of approximately seventeen teeth, which decrease slightly in length from base to apex. Middle tarsal claws strongly curved inward at the base, posterior claw thicker than anterior one. Chaetotaxy of male front leg as shown on Plate XLIX. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	119	64	..
Middle leg	100	88	42	19
Hind leg	100	83	33	33

Female structural characteristics.—Viewed from above, the outline of the head is rounded, with the vertex extending slightly beyond the anterior margins of the eyes; greatest width of the head nine tenths of the pronotal humeral width and almost four times the anterior width of the vertex; synthlipsis narrow, slightly more than one fourth the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the length of the pronotum. Pronotum with its humeral width twice its median length; lateral margins diverging and almost one half the median length; posterior margin convex, medianly emarginate. Facial tubercle with a faint triangular depression. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	118	54	29
Middle leg	100	81	41	21
Hind leg	100	82	34	32

Location of types.—Type material from Madagascar in the Paris Museum.

Comparative notes.—This species is almost identical with *A. sardea* H.-S. from which it can be best separated on the basis of the chaetotaxy of the male front leg. The setae of the fore tibia in this species are never spatulate whereas the second and third basal setae of *Anisops sardea* are spatulate. The tip of the cephalic horn in all the specimens that I have observed is black, a condition pointed out by Poisson (*loc. cit.*). This peculiarity is not encountered in *A. sardea*.

Remarks.—This species was first described as a sub-species by Poisson (*loc. cit.*). However, I am placing it on specific level on the basis of the above differences between it and *A. sardea* H.-S.

Data on distribution:

MADAGASCAR

Tananarive, 1921, R. Decary, five males, nineteen females (Paris Museum); two males, two females (F. H. Snow Museum).

Marais du Finerena, 1905, F. Geay, two males, eight females (Paris Museum).

Madagascar, 1897, E. Dorr, two females (Paris Museum).

Madagascar, 1897, F. de Zeltner, one female (Paris Museum).

Plaines du Sakondry, 1906, F. Geay, one female (Paris Museum).

Madagascar, P. Camboue, two females (Paris Museum).

Tananarive, purchased fr. Prof. Lamberton Nov. 1931, one male, one female (F. H. Snow Coll.).

Maroantsetra, purchased fr. Dr. O. Standinger, one female (F. H. Snow Coll.).

Mocquereya, Chutes de Samilia, Riv. N. Gamie, G. Severin, one male (U. S. Nat. Mus.).

Madagascar, one male, two females (Bueno Coll. of F. H. Snow Coll.).

Anisops bouvieri Kirkaldy

(Pl. XLIX, fig. 65; Pl. LV, fig. 100)

1904. *Anisops bouvieri* Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 116, 132.

1933. *Anisops bouvieri*, Hoffmann, Lingnan Sci. Jour., vol. 12, p. 256 (catalogue).

1933. *Anisops bouvieri*, Lundblad, Arch. für Hydrob., Suppl. vol. XII, p. 145 (a list of Indo-australian and Pacific members of this genus).

1935. *Anisops bouvieri*, Wu, Catalogus Insectorum Sinensium, vol. II, p. 575.

1941. *Anisops bouvieri*, Hoffmann, Lingnan Sci. Jour., vol. 20, p. 59 (catalogue).

Size.—Males, length 6.0 mm.-6.3 mm., greatest body width 1.5 mm.-1.8 mm.; females, length 5.7 mm.-6.0 mm., greatest body width 1.7 mm.-1.8 mm.

Shape.—Fusiform species; greatest body width about two fifths the body length.

Color.—General facies pearlaceous. Eyes gray. Abdominal venter dark brown with keel and segmental margins of the connexivum pearlaceous.

Male structural characteristics.—Viewed from above, the lateral outline of the head is rounded; vertex extended anteriorly into a short cephalic horn; greatest width of the head nine tenths the pronotal humeral width and slightly more than three times the anterior width of the vertex; synthlipsis narrow, almost one fourth the anterior width of the vertex; along the median longitudinal axis the head minus the cephalic horn is two thirds the length of the pronotum. Pronotum with its humeral width one and four fifth times

the median length; lateral margins diverging and two thirds the median length; posterior margin convex, medianly emarginate. Viewed ventrally the frons which forms the ventral margin of the cephalic horn is triangularly excavate; bordered laterally by two carinae; apex more or less acuminate. Labrum short and broad; basal width slightly more than one and one half its median length; apex acuminate; bears three tufts of hairs, one at each basal angle and one at the apex. Rostral prong (Pl. LV, fig. 100), as long as the third rostral segment; apex acuminate. Stridulatory comb (Pl. XLIX, fig. 65b) of approximately twelve teeth which decrease in length from base to apex. Middle tarsal claws strongly curved inward at base, posterior claw thicker than anterior one. The keel of the third abdominal segment is flattened and bordered on its lateral and apical margins by stout erect hairs. Chaetotaxy of the male front leg as shown on Plate XLIX. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	102	75	..
Middle leg	100	74	38	33
Hind leg	100	78	32	28

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width and slightly more than three times the anterior width of the vertex; synthlipsis wide, almost one half the anterior width of the vertex; along the median longitudinal axis the head is two thirds as long as the pronotum; lateral margins diverging and almost three fifths the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	114	57	29
Middle leg	100	90	45	22
Hind leg	100	84	32	28

Location of types.—Male type from Cochin China, in the Paris Museum.

Comparative notes.—This species is closely related to *Anisops batillifrons* Lundblad, however the cephalic horn is more or less acuminate and extends one fifth its ventral length beyond the anterior margin of the eyes, whereas in *A. batillifrons* the cephalic horn is rounded at the apex and extends only one twelfth its ventral length beyond the anterior margin of the eyes. In addition,

A. batillifrons lacks the tufts of labral hairs that are found on this species.

Data on distribution:

NEW GUINEA

Simbang Huon Gulf, 1898, Biro, one male, twenty-four females (F. H. Snow Coll.).

SIAM

Brangkok, Sept. 17, 1926, H. M. Smith (U. S. Nat. Mus.).

BURMA

Mohnyin, X-27-44, L. C. Kiuitert, two males, three females (F. H. Snow Coll.).

ASSAM

Tinsukia, IV-9-44, D. E. Hardy, one male (F. H. Snow Coll.).

INDIA

Barkuda, Chilka Lake, Ganjam Dist. Madras Pres. VIII-19, F. H. Gravely, twenty-five males, twenty-five females (F. H. Snow Coll.); thirty males, thirty-six females (Indian Museum).

Barkuda, Chilka Lake, Ganjam Dist. Madras Pres. VII-23-19, N. A. one male, twenty-two females (Indian Museum).

Waltair, I-27-21, fourteen males, nine females (Indian Museum).

Calcutta, Eden Gardens at light, X-26-11, F. H. Gravely, one male, two females (Indian Museum).

Calcutta, Eden Gardens at light, X-11, F. H. Gravely, one female (Indian Museum).

Calcutta, VIII-9-'06, two males (Indian Museum).

Bengal, Berhampore, Court, IV-13-10 S. W. K., one male (Indian Museum).

Bengal, Madhupur, X-16-09, C. Paiva, two males, seven females (Indian Museum).

Bengal, Berhampur Murshidabad, Sept. '12, Southwell, one male, five females (Indian Museum).

East Bengal, Damukdia Ghat, VII-22-17, Mus. Collr. four males, two females (Indian Museum).

Central Province, Puhapura, III-4-19, C. P. and F. H. G., twelve males, seven females (Indian Museum).

Puri Dist. Barkul, Orissa, XI-9th to 13th-12, Gravely, six males, twenty-one females (Indian Museum).

Madras, Ganjam Dist, Rambha, IX-20-13,, Annandale, seventeen males, five females (Bueno Coll. of F. H. Snow Coll.).

Andamans, fresh water tank, III-31-11, C. Paiva, three males, one female (Bueno Coll. of F. H. Snow Coll.).

Orissa, Lake Chilka, Satpara, IX-10-13, Annandale, seventeen males, two females (Bueno Coll. of F. H. Snow Coll.).

Anisops extendofrons n. sp.

(Pl. XLIX, fig. 66)

Size.—Males, length 6.4 mm.-6.8 mm., greatest body width 1.5 mm.-1.7 mm.; females, length 6 mm., greatest body width 1.8 mm.

Shape.—Subfusiform species; lateral margins in anterior half of

body, with exception of the head, almost parallel; posterior lateral margins converging.

Color.—General facies pearlaceous. Eyes brown. Legs testaceous. Abdominal venter dark brown or black, with keel and segmental margins of the connexivum testaceous.

Male structural characteristics.—Viewed from above, the lateral outline of the head is rounded with the anterior interocular space extended forward in a cephalic horn; greatest width of the head nine tenths the pronotal humeral width, slightly more than three times the anterior width of the vertex; synthlipsis narrow, less than one third the anterior width of the vertex; along the median longitudinal axis the head is approximately three fourths the pronotal length. Pronotum with its humeral width almost twice its median length; lateral margins diverging and slightly more than two thirds the median length; posterior margin convex, medianly concave. Viewed ventrally the frons, which forms the ventral surface of the cephalic horn, is triangularly excavate, bordered laterally by two carinae; apex more or less acuminate. Viewed laterally the cephalic horn extends one third its ventral length beyond the anterior margin of the eyes. Labrum short; basal width almost twice its median length; apex acuminate; bears three tufts of anteriorly curved hairs, one at each basal angle and one at the apex. Rostral prong slightly shorter than third rostral segment; apex acuminate. Fore tibia (Pl. XLIX, fig. 66b) with anterior margin curved at apex; stridulatory comb of approximately fourteen teeth which decrease in height from base to apex. Middle tarsal claws turned strongly inward at base; posterior claw thicker than anterior claw. Chaetotaxy of the male front leg as shown on Plate XLIX. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	123	96	..
Middle leg	100	92	46	23
Hind leg	100	78	30	29

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest head width nine tenths the pronotal humeral width, slightly less than four times the anterior width of the vertex; synthlipsis wide, almost one half the anterior width of the vertex; along the median longitudinal axis the head is one half the pronotal length. Pronotum with humeral width twice its median length; lateral margins diverging and three fifths the

median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	114	60	29
Middle leg	100	80	40	22
Hind leg	100	78	35	33

Location of types.—Male holotype, female allotype, five male and three female paratypes, Waltair, India, I-27-21 in the Indian Museum at Calcutta. Other paratypes are as follows: In the Indian Museum at Calcutta: one male, Puenjikara Isl. Cochin Backwater nr. Ernakulane, India, X-14, F. H. Gravely; one male, one female, Satara Dist. 2000', Nechal, W. Chata, F. H. Gravely. In the Snow Entomological Collection: five males, three females, Waltair, India, I-27-21.

Comparative notes.—Extremely closely related to *Anisops bouvieri* Kirk. and superficially the two species appear the same. However, careful examination of the males will show distinct differences. The anterior margin of the fore tibiae lack the subapical angle as found on *A. bouvieri* and also the long spine borne at the angle. The keel of the third abdominal segment of *A. extendofrons* is not flattened and bordered with hairs as in *A. bouvieri*, but covered with hairs.

Data on distribution:

INDIA

Br. India, Coimbatore, L. V. Newton S. J., one male (Bueno Coll. of F. H. Snow Coll.).

Anisops graciloides n. sp.

(Pl. LI, fig. 79)

Size.—Males, length 7.0 mm.-8.2 mm., greatest body width 1.5 mm.-2.1 mm.; females, length 7.5 mm., greatest body width 1.9 mm.

Shape.—Slender, fusiform species; greatest width about midway the body length.

Color.—General facies testaceous. Eyes brown or gray. Legs stramineous. Abdominal venter irregularly colored dark brown and gray.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width and six and one-half times the anterior width of the vertex; synthlipsis narrow; one fifth the anterior width of the vertex; along the median longitudinal axis the head is slightly more than two thirds the length of the pronotum. Pronotum with

its humeral width almost twice its median length; lateral margins only slightly diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly compressed laterally with a slight median depression. Labrum long, basal width slightly less than its median length; apex rounded. Rostral prong (Pl. LI, fig. 79b) shorter than third rostral segment; apex rounded. Stridulatory ridge (Pl. LI, fig. 79a) transversely striated. Stridulatory comb (Pl. LI, fig. 79c) of approximately sixteen teeth which increase slightly in length from base to apex. Chaetotaxy of front leg as shown on Plate LI. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	112	56	..
Middle leg	100	95	41	28
Hind leg	100	92	34	34

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the humeral width and almost four times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is almost two thirds the length of the pronotum. Pronotum with its humeral width twice the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	113	50	38
Middle leg	100	89	42	27
Hind leg	100	83	34	34

Location of types.—Male holotype and female allotype, Salisbury, S. Rhodesia, X-16-15, in the Snow Entomological Collection. Two male paratypes Africa nr. Kabale, Uganda, L. Bungymi, Feb. 1948, R. X. Williams in the Harvard Museum of Comparative Zoology.

Comparative notes.—This species is closely related to *Anisops gracilis* Hutchinson from which it can be separated by the fact that the males have the facial tubercle slightly compressed laterally and bearing a faint median depression. This condition is lacking on the males of *A. gracilis*. Also the rostral prong has a rounded apex instead of the acuminate apex of *A. gracilis*.

Data on distribution.—Known only from type series.

Anisops gracilis Hutchinson*

(Pl. LI, fig. 74)

1929. *Anisops gracilis* Hutchinson, Ann. South African Mus., vol. XXV, pt. 3, pp. 386-388, Pl. XXX, fig. 12; Pl. XXXI, fig. 4; Pl. XXXII, fig. 12.

Size.—Males, length 6.9 mm., greatest body width 1.8 mm.

Shape.—Slender, fusiform species; greatest width about halfway the body length.

Color.—General facies stramineous. Eyes brown. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width and five and one-half times the anterior width of the vertex; synthlipsis narrow, one fourth the anterior width of the vertex; along the median longitudinal axis the head is three fourths the length of the pronotum. Pronotum with its humeral width slightly less than twice the median length; lateral margins slightly diverging and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum long, median length equal to the basal width; apex rounded. Rostral prong (Pl. LI, fig. 74b) longer than third rostral segment; apex acuminate. Stridulatory ridge (Pl. LI, fig. 74c) with transverse striations; stridulatory comb of approximately fourteen even-length teeth. Chaetotaxy of the male front leg as shown on Plate LI. The relative lengths of the parts of the legs are as follows: †

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	113	62	..
Hind leg	100	83	31	33

Location of types.—Type material from South Africa in the South African Museum.

Comparative notes.—The body shape and coloration are similar to that of *A. balcis* Hutchinson from which it can be separated by the fact that the males of *A. gracilis* lack the flattened facial tubercle so characteristic of *A. balcis*. The latter species does not have a striated stridulatory ridge as found on the former species.

Data on distribution:

AFRICA

South Africa, Messina, Limpopo gorge, V-27-1921, gift to H. B. H. fr. G. W. Hutchinson, one male (F. H. Snow Coll.).

* Only a single male specimen of this species was in my material.

† Minus the middle pair of legs.

Anisops poweri Hutchinson*

(Pl. L, fig. 72; Pl. LIV, fig. 95)

1929. *Anisops poweri* Hutchinson, Ann. South African Mus., vol. XXV, pt. 3, pp. 398-399, Pl. XXX, fig. 13; Pl. XXXI, fig. 6, 6a.

1933. *Anisops poweri*, Hutchinson, Internat. ges. Hydrob. und Hydrog., vol. 28, pt. 5/6, p. 460 (ecological note).

Size.—Males, length 5.7 mm., greatest body width 1.5 mm.

Shape.—Small, fusiform species; greatest body width about mid-way the body length.

Color.—General body color stramineous. Eyes brown. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head is eight tenths the pronotal humeral width and slightly more than three times the anterior width of the vertex; synthlipsis narrow, slightly more than one fourth the anterior width of the vertex; length of the median longitudinal axis the head is slightly more than one half the length of the pronotum. Pronotum with its humeral width almost twice the median length; lateral margins diverging and two thirds the median length; posterior margin convex, medianly emarginate. Facial tubercle greatly swollen. Labrum with its basal width one and one half the median length; apex rounded. Rostral prong (Pl. LIV, fig. 95) slightly shorter than the third rostral segment. Stridulatory comb broken off of the legs of the specimen in my material. Chaetotaxy of the male front leg as shown on plate L. The relative length of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	105	56	..
Middle leg	100	87	41	26
Hind leg	100	81	32	36

Location of types.—Type material from Kimberly Cape, South Africa in the South African Museum.

Comparative notes.—The long claws of the male front leg are found on only one other species, *A. leesoniana* Hutch. from which it may be readily distinguished on the basis of the male facial tubercle and the fore tarsus. The facial tubercle of *A. poweri* is greatly swollen and the basal inner surface of the fore tarsus bears a median row of three long spines. Neither of these conditions is found on *A. leesoniana*.

* Only a male specimen was present in my material.

Data on distribution:

AFRICA

Orange River, Diep Klof, east of Aliwil N., IX-5-28, gift to H. B. H. fr. G. E. Hutchinson, one male (F. H. Snow Coll.).

Anisops leesoniana Hutchinson*

(Pl. L, fig. 70)

1929. *Anisops leesoniana* Hutchinson, Ann. South African Mus., vol. XXV, pt. 3, pp. 390-391, Pl. XXX, fig. 14; Pl. XXXI, fig. 7.

Size.—Males, length 4.8 mm.; greatest body width 1.3 mm.

Shape.—Small, fusiform species; greatest body width midway the body length.

Color.—General facies stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width of the head almost equal to the pronotal humeral width and seven times the anterior width of the vertex; synthlipsis narrow, one sixth the anterior width of the vertex; along the median longitudinal axis the head is three fourths the length of the pronotum. Pronotum with its humeral width almost twice its median length; lateral margins almost parallel and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum with lateral margins strongly converging; basal width equal to the median length; apex more or less acuminate. Rostral prong (Pl. XV, fig. 70b) slightly shorter than third rostral segment; apex acuminate. Stridulatory comb (Pl. L, fig. 70c) of approximately twenty-three teeth, with the apical one slightly shorter than the remainder. Chaetotaxy of the male front leg as shown on Plate L. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	105	70	..
Middle leg	100	86	41	25
Hind leg	100	87	31	31

Location of types.—Male holotype from South Rhodesia in the South African Museum.

Comparative notes.—This species and *A. poweri* Hutchinson are unique in having the extremely long front tarsal claws, more than one half the length of the fore tarsi. *Anisops leesoniana* differs in many respects from *A. poweri* however; the facial tubercle is not

* Only a single male specimen in my material and it is badly mutilated.

greatly swollen as in *A. poweri*, and the fore tarsal claws are not curved as in the case of the latter.

Data on distribution:

AFRICA

South Africa, Rikatile, Lourenco Marques. Coll. Junod., one male (Basel Nat. Hist. Mus., Switzerland).

Anisops breddeni Kirkaldy

(Pl. LI, fig. 78; Pl. LV, fig. 99)

1901. *Anisops breddeni* Kirkaldy, The Entomologist, vol. 34, pp. 5-6.

1901. *Anisops breddeni*, Breddin, Abhand. Naturf. Gesell. Halle, vol. XXIV, p. 103 (ecological note).

1904. *Anisops breddeni*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 117, 132.

1910. *Anisops breddeni*, Distant, Fauna of British India, Rhynchota, vol. V, p. 333, fig. 194 (ecological note; expresses doubt as to its belonging in this genus).

1928. *Anisops breddeni*, Dover, Treubia, vol. X, p. 171 (ecological note, disagrees with Distant and believes it should remain in the genus).

1933. *Anisops breddeni*, Lundblad, Archiv. für Hydrob. Suppl. vol. XII, p. 145 (a list of Indo-australian and Pacific members of this genus).

Size.—Males, length 5.7 mm.-6.6 mm., greatest body width 1.2 mm.-1.6 mm.; females, length 5.4 mm.-5.7 mm., greatest body width 1.2 mm.-1.5 mm.

Shape.—Slender, slightly fusiform species; greatest width about one half the body length.

Color.—General facies pearlaceous. Eyes brown. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is more or less conical with the anterior margin of the vertex extending slightly beyond that of the eyes; greatest width of the head almost equal to the pronotal humeral width and five to six times the anterior width of the vertex; eyes holoptic for the basal three eighths of the median length of the head; along the median longitudinal axis the head is slightly more than one half the length of the pronotum. Pronotum with its humeral width almost twice its median length; lateral margins parallel and two thirds the median length; posterior margin convex, medianly emarginate. Scutellum greatly reduced, basal width only slightly more than median length. Facial tubercle swollen. Labrum strongly convex transversely; basal width equal to its median length; apex rounded. Rostral prong (Pl. LV, fig. 99) acuminate. Rostrum with the second rostral segment produced into a flaplike process that extends behind the third and fourth segments, not adjacent to the fourth and the apical half of the third segments. Fore leg (Pl. LI, fig. 78a) with femur greatly expanded dorso-ventrally, with dorsal margin convex; stridulatory comb (Pl. LI, fig. 78b) highly

irregular, apical fourth and fifth teeth flattened and capitate. Chaetotaxy of the male front leg as shown on Plate LI. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	114	71	..
Middle leg	100	85	40	33
Hind leg	100	77	31	28

Female structural characteristics.—Viewed from above, the outline of the head is rounded with the vertex extending slightly beyond the anterior margin of the eyes, greatest width of head nine tenths the pronotal humeral width and slightly more than five times the anterior width of the vertex; eyes holoptic for the basal third of the median length of the head; along the median longitudinal axis the head is three fourths the length of the pronotum. Pronotum with humeral width slightly more than twice the median length; lateral margins slightly diverging and almost as long as the median length of the pronotum; posterior margin convex, medianly emarginate. Second rostral segment produced into a short spur on its apical posterior margin. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	57	36
Middle leg	100	86	40	27
Hind leg	100	81	34	34

Location of types.—The type material from Celebes in the Bredin Collection of the Hamburg Museum. One female co-type, Celebes, Lura See bei Lura, VIII-95, Dr. Sarasin, in the Kirkaldy Collection of the Snow Entomological Collection.

Comparative notes.—Very closely related to *Anisops kempi* n. sp. from which it can best be separated on the basis of the males. The males of *A. breddeni* Kirkaldy have the lateral margins of the pronotum almost parallel while in the former species they are distinctly diverging. Also the scutellum is much smaller in the case of *A. breddeni*, with its basal width only slightly more than its median length whereas in *A. kempi* the basal width of the pronotum is one and one third the median length. The outline of the head of *A. breddeni* is more or less conical whereas that of *A. kempi* is rounded.

Data on distribution:

INDIA

Puenjikara Island, Cochin Backwater, nr. Ernakulane, X-14, F. H. Gravely, one male (F. H. Snow Coll.); one male (Indian Museum).

Barkuda, Chilka Lake, Ganjam Dist. Madras Pres. VIII-19, F. H. Gravely (F. H. Snow Coll.)

Calcutta, Lakes, Sta. 4, three females (Indian Museum).

BURMA

Rangoon, VIII-21-15, Hodgard, three males (Indian Museum); one female (F. H. Snow Coll.)

CEYLON

Mt. Lavinia, Mar. 9, '96, Madarasz, one male, one female (F. H. Snow Coll.)

Anisops kempi n. sp.

(Pl. LI, fig. 75)

Size.—Males, length, 5.7 mm.-6.6 mm., greatest body width 1.3 mm.-1.6 mm.; females, length 5.4 mm.-6.0 mm., greatest body width 1.4 mm.-1.6 mm.

Shape.—Slender, slightly fusiform species, with greatest width about midway its length.

Color.—General facies stramineous. Eyes brown. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest head width nine tenths the pronotal humeral width and five to seven times the anterior width of the vertex; eyes holoptic in basal third of head; along median longitudinal axis head approximately two thirds the pronotal length. Pronotum with its humeral width about one and one half its median length; lateral margins diverging and two thirds median length; posterior margin convex, medianly emarginate. Scutellum with basal width one and one third its median length. Facial tubercle slightly raised. Labrum short; basal width only slightly more than median length; apex rounded. Rostral prong (Pl. LI, fig. 75b) acuminate at apex. Second rostral segment extended into flaplike process behind third and fourth rostral segments, not adjacent to the fourth or apical half of the third rostral segments. Fore leg (Pl. LI, fig. 75a) with femur greatly expanded dorsoventrally; stridulatory comb highly irregular, with four prominent teeth, the middle two flattened and capitate (Pl. LI, fig. 75c). Chaetotaxy as shown on Plate LI. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	69	..
Middle leg	100	82	41	23
Hind leg	100	82	32	26

Female structural characteristics.—Viewed from above the outline of the head is rounded; greatest head width nine tenths pronotal length, five times the anterior width of the vertex; eyes holoptic in basal third of the head; along the median longitudinal axis the head is approximately two thirds the pronotal length. Pronotum with humeral width slightly more than twice its median length; lateral margins diverging and almost one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	133	50	33
Middle leg	100	86	38	25
Hind leg	100	86	34	30

Location of types.—Male holotype, female allotype, Assam, Tinsukia IV-9-44, D. E. Hardy in the Snow Entomological Collection. The paratypes are as follows: In the Snow Entomological Collection: four males, two females, Drappa nr. Calcutta, India, I-22-11, Kemp. In the Indian Museum at Calcutta: One male, Calcutta, at light, VI-7-11, F. H. G.; one male, four females, Calcutta, XII-2-07; two males, one female, Calcutta, Eden gardens, at light, X-14-11, F. H. Gravely; one female, Garia nr. Calcutta, XII-13-10; one female, Lower Burma, Amherst Dist., Kawkareih to third Camp, XI-21-11 to XII-1-11, F. H. Gravely. In the United States National Museum: one male, Siam, Bangkok, Sept. 17, 1926, H. N. Smith.

Comparative notes.—This species appears very similar to *Anisops breddeni* Kirkaldy. However, the pronotal lateral margins of *A. kempi* diverge whereas in *A. breddeni* they are almost parallel. Also the head of the latter is more or less conical with the vertex extending beyond the anterior margins of the eyes, while in *A. kempi* the outline of the head is rounded. Also the latter species has a much larger scutellum which has a basal width one and one third its median length, whereas in *A. breddeni* the scutellum is small with its basal width only slightly more than its median length.

Data on distribution:

INDIA

Orissa, Satpara, IX-10-13, N. A., one male (F. H. Snow Coll.) United Prov. Cannapore Dist. X-1 to 8-1911, J. W. C., two males, four females (F. H. Snow Coll.).

Anisops crinita n. sp.

(Pl. L, fig. 68)

Size.—Males, length 4.9 mm.-5.4 mm., greatest body width 1.3 mm.-1.5 mm; females, length 4.8 mm.-5.7 mm., greatest body width 1.3 mm.-1.6 mm.

Shape.—Small, fusiform species; greatest body width about mid-way the body length.

Color.—General facies stramineous or testaceous. Eyes brown or gray. Hemelytra may have hyaline areas which appear darker due to the underlying dark brown dorsal body surface. Legs stramineous. Abdominal venter dark brown or black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width nine tenths the pronotal humeral width, five times the anterior width of the vertex; synthlipsis narrow, between one sixth and one seventh the anterior width of the vertex; along the median longitudinal axis the head is slightly more than three fifths the pronotal length. Pronotum with its humeral width approximately twice the median length; lateral margins diverging and at least one half the median length; posterior margin almost straight, with only slight median emargination. Frons slightly depressed, with facial tubercle flat and covered with small procumbent hairs. Labrum short, covered with long hairs; basal width one and one half its median length; apex broad and rounded, almost truncate. Rostral prong (Pl. L, fig. 68c) shorter than third rostral segment; apex truncate. Stridulatory comb (Pl. L, fig. 68b) of approximately six to nine even-length teeth. Chaetotaxy of the male front leg as shown on Plate L. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	75	..
Middle leg	100	80	40	23
Hind leg	100	79	30	30

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width nine tenths the pronotal humeral width; four to six times the anterior width of the vertex; synthlipsis variable, from one fifth to one sixth the anterior width of the vertex; along the median longitudinal axis the head is three fifths the pronotal length. Pronotum with humeral width slightly more than twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly

emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	47	29
Middle leg	100	81	38	20
Hind leg	100	80	28	30

Location of types.—Male holotype, female allotype, one male and one female paratypes, Corfu, J. Sahlb. in the Kirkaldy Collection of the Snow Entomological Collection. Other paratypes are as follows: In the Snow Entomological Collection: twelve males, five females, Daulatabad, Seistan Village, pond, XII-20-18, Sta. 29, B. S.; one male, New Caledonia, Noumea, A. Faval. In the Indian Museum at Calcutta: thirteen males, five females, Daulatabad, Seistan Village, pond, XII-20-18, Sta. 29, B. S.; three males, five females, Baluchistan, Zangi Nawar, 20 mi. w. of Nushki, XII-25 to 29-18, Sta. 35, B. S., N. A. & S. K.; two males, three females, Ganjam Dist. Barkuda, Chilka Lake, Madras Pres. VIII-18, F. H. Gravely; one male, Baluchistan, Quetta, 5700", pond in res. garden, Sta. 3, XI-10, BS: one male, one female, Berhampur, Murshidabad, Bengal, Sept. '12, Southwell.

Comparative notes.—About the same size and general appearance as *A. nivea* (Fabricius). However, the males of *A. crinita* lack the excavate facial tubercle and peculiarly twisted tarsal claws as found on the males of *A. nivea*. Also the labral hairs of *A. crinita* are not organized into definite tufts as those of *A. nivea*.

Data on distribution.—Known only from type series.

Anisops majiense n. sp.

(P. LII, fig. 83)

Size.—Males, length 6 mm., greatest body width 1.5 mm.; females, length 6.3 mm., greatest body width 1.6 mm.

Shape.—Fusiform species; greatest width about midway the body length.

Color.—General facies stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width slightly less than the pronotal humeral width and five times the anterior width of the vertex; synthlipsis extremely narrow, one tenth the anterior width of the vertex; along the median longitudinal axis the head is eight tenths the pronotal length. Pronotum with its humeral width

twice the median length; lateral margins diverging and slightly more than three fifths the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum short and broad; basal width twice the median length; apex more or less acuminate. Rostral prong (Pl. LII, fig. 83b) longer than the third rostral segment; apex acuminate. Fore leg (Pl. LII, fig. 83a) with anterior femur enlarged at apex and rounded; stridulatory comb (Pl. LII, fig. 83c) of approximately twenty-four teeth, with basal fifteen almost twice the length of the apical nine. Chaetotaxy of the male front leg as shown on Plate LII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	110	55	..
Middle leg	100	82	36	23
Hind leg	100	82	32	32

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head only slightly less than the pronotal humeral width and five to six times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is almost as long as the pronotum. Pronotum with its humeral width one and one half the median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	121	71	54
Middle leg	100	91	46	27
Hind leg	100	81	33	33

Location of types.—Male holotype, female allotype, Afrique, Orient, Angl. Maji-Chumvi, (Wa-Nyika) 1904, Ch. Alluaud, in the Paris Museum.

Comparative notes.—The chaetotaxy of the male front legs is strongly suggestive of a relationship with *A. debilis* Gerst. However, the latter species does not have the extremely narrow (one tenth the anterior width of the vertex) synthlipsis, nor the apically enlarged and rounded front femur as found on the males of this species.

Data on distribution.—Known only from type series.

Anisops debilis Gerstaecker

(Pl. LII, fig. 80)

1873. *Anisops debilis* Gerstaecker, Decken's Reise in Ost Africa III, pt. 2, p. 425.
 1904. *Anisops debilis*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 119, 132.
 1926. *Anisops debilis*, Jaczewski, Annal. Zool. Musei Polonici Hist. Nat. vol. V., no. 2, pp. 86-88, text fig. 38, 39, 40, 41.
 1929. *Anisops debilis*, Hutchinson, Ann. South African Mus., vol. XXV, pt. 3, pp. 391-392, Pl. XXX, fig. 15.
 1930. *Anisops debilis*, Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. VI, p. 58 (ecological note).
 1933. *Anisops debilis*, Hutchinson, Inter. ges. Hydrob. Hydrog., vol. 28, p. 45, pt. 5/6, p. 461.
 1935. *Anisops debilis*, Poisson, Mus. Nat. Hist. Nat., vol. III, pp. 211-213, text figs. 26, 27.
 1937. *Anisops debilis*, Poisson, Ann. Soc. Ent. France, vol. CVI, pp. 117-118, text fig. 3.
 1939. *Anisops debilis*, Poisson, Bull. Soc. Ent. France, vol. 44, p. 43 (ecological note).

Size.—Males, length 5.8 mm.-6.3 mm., greatest body width 1.5 mm.-1.7 mm.; females, length 6.3 mm., greatest body width 1.5 mm.

Shape.—Slender, fusiform species; greatest body width about midway the body length.

Color.—General facies gray. Eyes brown. Eyes and pronotum testaceous. Scutellum testaceous with two triangular hyaline areas on each side of the anterior half. Hemelytra hyaline and appear dark gray due to the underlying black dorsal body surface. Legs stramineous. Abdominal venter dark brown or black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the pronotal humeral width and six times the anterior width of the vertex; synthlipsis narrow, between one fourth and one fifth the anterior width of the vertex; along median longitudinal axis the head is more than one half the length of the pronotum. Pronotum with its humeral width twice the median length; lateral margins diverging and three fifths the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised. Labrum with its basal width one and one third the median length; apex rounded. Rostral prong (Pl. LII, fig. 80b) longer than the third rostral segment; apex acuminate. Stridulatory comb (Pl. LII, fig. 80c) of approximately twenty-one teeth which decrease slightly in length from base to apex. The chaetotaxy of the male front leg as shown on Plate LII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	114	71	..
Middle leg	100	86	43	35
Hind leg	100	80	31	31

Female structural characteristics.—Viewed from above the outline of the head is rounded; greatest width of the head nine tenths the pronotal humeral width and five times the anterior width of the vertex; synthlipsis narrow, less than one third the anterior width of the vertex; along the median longitudinal axis the head is slightly more than one half the length of the pronotum. Pronotum with its humeral width twice the median length; lateral margins diverging and almost one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	115	54	31
Middle leg	100	82	41	32
Hind leg	100	80	30	30

Location of types.—Type material from East Africa in the Berlin Museum.

Comparative notes.—The narrow synthlipsis and shape of the rostral prong make this species similar to *A. vitrea* Signoret. However, this species is a larger one than *A. vitrea* and the males lack the flattened facial tubercle as found on the *A. vitrea*.

Data on distribution:

AFRICA

French Sudan, Bamako, March 1929, A. Bang Baas, purchased fr. Dr. O. Standinger, two males, five females (F. H. Snow Coll.).

Uganda, Katona, IX-1913, Muyenju, exchange fr. Horvath, one male, one female (F. H. Snow Coll.).

Messina, Limpopo, V-25-'92, gift to H. B. H. fr. G. E. Hutchinson, two females (F. H. Snow Coll.).

Ogaden, Quabi-Chebeli, Imi Mission, 1902, Du Bourg de Bozas, two males, one female (F. H. Snow Coll.); six females, one male (Paris Museum) Soudan, Mioro, Oct. 1909, E. De Zeltner, five males, one female (Paris Museum).

Env. de Zinder, Guidimauni (mission Tilho) 1910, Dr. R. Gaillard three males (Paris Museum).

Central Afr. Uganda, Entebbe, H. Rolle, one male, three females (Buena Coll. of F. H. Snow Coll.).

Anisops exigera Horvath

(Pl. LI, fig. 77)

1919. *Anisops exigera* Horvath, Abhand. Senckenberg. naturf. Gesell., vol. XXXV, p. 314.

1933. *Anisops exigera*, Lundblad, Arch. für Hydrob. Suppl., vol. XII, p. 145 (a list of Indo-australian and Pacific forms of this genus).

Size.—Males, length 4.3 mm.-4.5 mm., greatest body width 1.2 mm.; females, length 4.3 mm.-4.5 mm., greatest body width 1.2 mm.

Shape.—Small, subfusiform species with lateral margins in an-

terior half of body almost parallel, lateral margins of posterior half converging.

Color.—General facies pearlaceous. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width of the head eight tenths the pronotal humeral width and six times the anterior width of the vertex; synthlipsis narrow, from one fifth to one sixth the anterior width of the vertex; along the median longitudinal axis the head is almost as long as the pronotum. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and one half as long as the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised, Labrum with its basal width one and one fourth times its median length; apex truncate, with its length almost one half the basal width. Rostral prong (Pl. LI, fig. 77b) shorter than the third rostral segment; apex rounded. Stridulatory comb (Pl. LI, fig. 77c) of approximately ten distinct teeth which increase in length toward the middle. Chaetotaxy of the front leg as shown on Plate LI. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	114	77	..
Middle leg	100	78	33	22
Hind leg	100	78	30	30

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head nine tenths the pronotal humeral width and six times the anterior width of the vertex; synthlipsis narrow, one fifth the anterior width of the vertex; along the median longitudinal axis the head is two thirds the length of the pronotum. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and slightly more than one-half the median length; posterior margin convex, slightly convex medianly. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	124	44	32
Middle leg	100	77	35	22
Hind leg	100	77	31	31

Location of types.—Type material from New Guinea, Simbang Huon Gulf, 1898, Biro, in the Budapest Museum in Hungary.

Comparative notes.—This species is about the same size and general facies as *Anisops nivea* Fabr. from which it can be readily separated at once on the basis of the males which lack the excavate frons as found on the males of *A. nivea*. Both sexes of *A. exigera* possess a much narrower synthlipsis, only one fifth to one sixth the anterior width of the vertex, where as the synthlipsis of *A. nivea* is much wider, being approximately one third the anterior width of the vertex.

Data on distribution:

NEW GUINEA

Simbang Huon Golf, 1898, Biro (determined by Horvath), one male (F. H. Snow Coll.).

INDIA

Puenyikara Isl., Cochin Backwater nr. Ernakulane, X-14, F. H. Gravely, nine males, fourteen females (F. H. Snow Coll.).

Central Province, Varcam Tank nr. Pachmachi, Satpura Hills, 3000', Sta. 16, C. P. and F. H. G., thirteen males, nine females (Indian Museum).

Morihan, XI-20-15, Rescee, five females (Indian Museum).

Anisops vitrea Signoret

(Pl. LI, fig. 76)

1860. *Anisops vitrea* Signoret, Ann. Soc. Ent. France, vol. VIII, no. 3, p. 792.

1895. *Anisops vitrea*, De Carolini, Ann. Mus. Civ. Stor. Nat. Genova, Series 2a, vol. XV (XXXV), p. 19 (ecological note).

1899. *Anisops vitrea*, Kirkaldy, Ann. Soc. Ent. France, vol. LXVIII, pp. 160-167 (= *persephone* Kirkaldy).

1904. *Anisops vitrea*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 119, 132.

1926. *Anisops vitrea*, Horvath, Arch. für Zool., vol. 18A, no. 31, p. 2 (determined in error; actually *A. jaczewski* Hutchinson).

1926. *Anisops vitrea*, Jaczewski, Ann. Zool. Musei Polonici Hist. Nat., vol. V, p. 86 text figs. 42, 43, 44 (determined in error; actually *A. jaczewski* Hutchinson)

1928. *Anisops vitrea*, Hutchinson, Ann. Mag. Nat. Hist., Ser. 10, vol. I, pp. 303-304, text figs. 1, a, b (cites the error of Horvath and Jaczewski and names the species observed by them *A. jaczewski*).

Referring to this species also

1898. *Anisops persephone* Kirkaldy, Wiener Ent. Zeit., vol. XVIII, p. 142.

1913. *Anisops alabrana*, Distant, Trans. Linn. Soc. London, vol. 16, p. 189, Pl. XIII, fig. 30.

1927. *Anisops alabrana*, Hutchinson, Ann. Mag. Nat. Hist., Ser. 9, vol. 19, p. 376, text figs. 1, a, b.

Size.—Males, length 4.5 mm.-5.1 mm., greatest body width 1.2 mm.-1.3 mm.; females, length 4.5 mm.-5.1 mm., greatest body width 1.2 mm.-1.3 mm.

Shape.—Small, subfusiform species; greatest body width about one third the length of the body.

Color.—General facies dark gray. Eyes brown. Vertex and pronotum stramineous, the latter may have a median longitudinal band

of orange. Scutellum testaceous or orange with anterior margin dark brown. Hemelytra hyaline and appear dark gray due to the dark color of the underlying body surface. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width of the head eight tenths the pronotal humeral width and six to seven times the anterior width of the vertex; synthlipsis narrow, from one sixth to one eighth the anterior width of the vertex; along the median longitudinal axis the head is almost as long as the pronotum. Pronotum with its humeral width slightly more than twice the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised and flattened on ventral surface; flattened area surrounded by more or less triangular, faint ridge. Labrum short and with a few procumbent hairs; basal width almost twice the median length. Rostral prong (Pl. LI, fig. 76b) longer than the third rostral segment; apex acuminate. Stridulatory comb (Pl. LI, fig. 76c) of approximately twenty teeth, teeth slightly shorter at apex than at base. Chaetotaxy of the male front leg as shown on Plate LI. The relative lengths of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	80	..
Middle leg	100	85	41	27
Hind leg	100	75	33	33

Female structural characteristics.—Viewed from above the outline of the head is rounded; greatest width of the head almost nine tenths the pronotal humeral width and seven times the anterior width of the vertex; synthlipsis narrow, about one fourth the anterior width of the vertex; along the median longitudinal axis the head is two thirds the length of the pronotum. Pronotum with its humeral width slightly more than twice the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	54	32
Middle leg	100	85	41	27
Hind leg	100	76	33	33

Location of types.—Type material in Stockholm Museum.

Comparative notes.—Though not quite as robust as *Anisops edepol* Kirk., this species is of approximately the same length. However, the two are by no means similar. They can be readily distinguished by the fact that the latter species has the posterior margin of the pronotum almost straight instead of convex and medianly emarginate as in the case of *A. vitrea*. Also the males of *A. vitrea* lack the short spur on the facial tubercle as found on the males of *A. edepol*.

Remarks.—I was fortunate in having at my disposal some of the specimens of *Anisops aldabrana* Distant collected by J. F. Fryer at the same time as the type. Though a trifle smaller than *A. vitrea*, this species is identical in every other respect and therefore is being placed as a synonym of *A. vitrea*.

Data on distribution:

MADAGASCAR

Tananarive, purchased from Prof. C. Lambertson, thirty-six males, thirty-four females (F. H. Snow Coll.).

Moroantsetra, March, 1929, A. Bang Baas, purchased from Dr. O. Standinger, nineteen males, twenty-nine females (F. H. Snow Coll.).

Madagascar, 1897, F. de Zeltner, one female (Paris Museum).

Reg. du Sud-est, Vallee du Fanjahira Isaka, 1901, Ch. Alluaud, one male (Paris Museum).

Boeni, Maevatanano, Oct.-Nov. 1899, Dr. J. DeCorse, two females (Paris Museum).

Madagascar, two males, (Bueno Coll. of F. H. Snow Coll.).

Madagascar, 1897, E. Dorr, four females (Paris Museum).

Prov. D'Ankavandra, I-98, S. Hure, one male, one female (Paris Museum).

Marais du Finerena, 1905, G. Geay, three males, three females (Paris Museum).

Antanimora, 1901, Ch. Alluaud, two males, four females (Paris Museum).

Annanariva, Sikora, 1896, Noualhier, three males, one female (Paris Museum).

Diego-Suarez, five males (U. S. Nat. Mus.).

Diego-Suarez, 1893, Ch. Alluaud, five males, eleven females (U. S. Nat. Mus.); one female (Paris Museum).

ALDABRA ISLAND

Aldabra, IX-'08, J. C. F. Fryer, one male, three females (F. H. Snow Coll.).

MAURITIUS

Roduit, III-25-1948, R. Manet, three males, one female (F. H. Snow Coll.).

LA REUNION

Plides Palmistes, 1897, Ch. Alluaud, one male, (Bueno Coll. of F. H. Snow Coll.).

Anisops hypatia Hutchinson

(Pl. LII, fig. 82)

1929. *Anisops hypatia* Hutchinson, Ann. South African Mus. vol. XXV, pt. 3, pp. 399-400, Pl. XXX, fig. 16; Pl. XXXII, figs. 2, 2a.

Size.—Males, length 5.4 mm., greatest body width 1.5 mm.; females, length 5.7 mm., greatest body width 1.7 mm.

Shape.—Small, fusiform species; greatest body width midway the body length.

Color.—General facies stramineous. Eyes brown. Abdominal venter dark brown with keel and segmental margins stramineous.

Male structural characteristics.—Viewed from above the outline of the head is rounded with the anterior margin almost straight; greatest width of the head equal to the pronotal humeral width and five times the anterior width of the vertex; synthlipsis narrow, slightly more than one fourth the anterior width of the vertex; along the median longitudinal axis the head is slightly shorter than the length of the pronotum. Pronotum with its humeral width twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. Facial tubercle raised. Labrum with basal width almost one and one-half the median length; apex rounded. Rostral prong (Pl. LII, fig. 82b) as long as the third rostral segment; apex acuminate. Stridulatory comb (Pl. LII, fig. 82c) of approximately fourteen teeth which increase in length from base to apex. Chaetotaxy of the male front leg as shown on Plate LII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	124	92	..
Middle leg	100	80	39	24
Hind leg	100	81	36	38

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head slightly less than the pronotal humeral width and five times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is almost equal to the length of the pronotum. Pronotum with its humeral width twice its median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	118	55	35
Middle leg	100	94	42	32
Hind leg	100	85	33	34

Location of types.—Type material from Cape Province, Africa in the South African Museum.

Comparative notes.—This species is of the same general appearance as *A. amaryllis* Hutchinson, however the head of the males is much wider, being equal to the pronotal humeral width instead of only nine tenths the pronotal humeral width as in *A. amaryllis*. Also the latter species lacks the short basal row of three small spines as found on the inner surface of the fore tarsi of *A. hypatia*.

Data on distribution:

AFRICA

Concordia, pond nr. Knysna, XII-23-1926, Gift to H. B. H. fr. G. E. Hutchinson, one male, one female (F. H. Snow Coll.).

Anisops balcis Hutchinson

(Pl. LII, fig. 84; Pl. LV, fig. 97)

1930. *Anisops balcis* Hutchinson, Proc. Zool. Soc. London, vol. XXIX, prt. 2, pp. 447-448, text fig. 4, a, b, c.

1930. *Anisops balcis*, Hutchinson, Ann. Mag. Nat. Hist. vol. VI, Series 10, p. 59 (ecological note).

1932. *Anisops balcis*, Hutchinson, Ann. Mag. Nat. Hist. vol. IX, Ser. 10, p. 324 (ecological note).

1933. *Anisops balcis*, Hutchinson, Internat. ges. Hydrob. und Hydrog., vol. 28, prt 5/6, p. 462 (ecological note).

1933. *Anisops balcis*, Jaczewski, Linn. Society Jour. Zool., vol. XXXVIII, p. 345 (ecological note).

Size.—Males, length 6.8 mm., greatest body width 1.8 mm.; females, length 6.6 mm., greatest body width 1.8 mm.

Shape.—Slender and slightly fusiform species; greatest body width slightly before midway the body length.

Color.—General facies testaceous. Abdominal venter dark brown with keel and segmental margins of the connexivum testaceous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of the head eight tenths the pronotal humeral width and seven times the anterior width of the vertex; synthlipsis narrow, one fourth the anterior width of the vertex; along the median longitudinal axis the head is three fourths the length of the pronotum. Pronotum with its humeral width almost twice the median length; lateral margins almost parallel, only slightly diverging and two thirds the median length; posterior margin convex, medianly emarginate. Facial tubercle slightly raised and triangularly flattened. Labrum short and broad; basal width one and one half its median length; apex rounded. Rostral prong (Pl. LV, fig. 97) longer than the third rostral segment; apex acuminate. Anterior femur enlarged dorso-ventrally in apical half; apex truncate. Stridulatory comb (Pl. LII, fig. 84b) of about twenty-two

teeth, increasing in length at the middle. Chaetotaxy of the front leg as shown on Plate LII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	112	75	..
Middle leg	100	85	39	26
Hind leg	100	78	32	32

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head eight tenths the pronotal humeral width and five and one half times the anterior width of the vertex; synthlipsis narrow, slightly more than one fourth the anterior width of the vertex; along the median longitudinal axis the head is almost two thirds the length of the pronotum. Pronotum with its humeral width slightly more than twice the median length; lateral margins diverging and three fifths the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	114	57	33
Middle leg	100	84	32	27
Hind leg	100	78	32	32

Location of types.—Type material from Lake Zwai, c. 5500', XI-4-1926, J. Omer-Cooper, in the British Museum.

Comparative notes.—This species is similar in body shape to *A. gracilis* Hutchinson from which it can be distinguished by the fact that the males lack the transversely striated ridge as found on the latter species. The males of *A. gracilis* do not possess the flattened facial tubercle found on the males of this species.

Data on distribution:

AFRICA

Uganda, Hippo Pt. Lake Victoria, Feb. 29, 1948, F. X. Williams, two males (Harv. Mus. Comp. Zool.).

Uganda, Lake Baringo, 1931, E. W. Worthington, one male (F. H. Snow Coll.).

Abyssinia, Hora Abjata, small pond in Marsh, XI-18-1926, J. Omer-Cooper, one male, one female, exchange from British Museum (F. H. Snow Coll.).

Anisops biroi n. sp.

(Pl. XLV, fig. 49)

Size.—Males, length 4.2 mm.-4.5 mm., greatest body width 1.2 mm.-1.3 mm.; females, length 4.3 mm., greatest body width 1.2 mm.

Shape.—Small, fusiform species, with greatest width about two fifths the body length.

Color.—General facies stramineous. Eyes brown. Pronotum may be hyaline and appear the brown color of the underlying scutellum. Legs stramineous. Abdominal venter dark brown with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—As viewed from above, the outline of the head is rounded with its greatest width nine tenths the pronotal humeral width and approximately nine times the anterior width of the vertex; synthlipsis narrow, approximately one fifth the anterior width of the vertex; along the median longitudinal axis the length of the head is equal to or slightly less than that of the pronotum. Pronotum with its humeral width at least twice its median length; lateral margins diverging and slightly less than one half the median length; posterior margin convex, medianly emarginate. Facial tubercle simple, neither raised nor excavate. Rostral prong (Pl. XLV, fig. 49b) at least as long as third rostral segment; apex acuminate. Labrum short and spinose; basal width slightly more than median length; apex acuminate. Stridulatory comb (Pl. XLV, fig. 49c) of approximately twenty-two teeth. Chaetotaxy of the male front legs as shown on Plate XLV. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	125	81	..
Middle leg	100	83	36	26
Hind leg	100	83	30	33

Female structural characteristics.—As viewed from above, the outline of the head is rounded; greatest width of the head nine tenths the pronotal humeral width and eight times the anterior width of the vertex; synthlipsis wide, one third the anterior width of the vertex; along the median longitudinal axis the head is seven tenths the length of the pronotum. Pronotum with its humeral width two and one half times the median length; lateral margins diverging and one half the median length; posterior margin convex, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	120	54	34
Middle leg	100	78	34	28
Hind leg	100	83	31	33

Location of types.—Male holotype, female allotype, two male and one female paratypes, New Guinea, Seleo Berlinhafen, '96, Biro in the Kirkaldy Collection of the Snow Entomological Collection.

Comparative notes.—Very similar to *A. rigoensis* n. sp. from which

it differs in having its rostral prongs at least as long as the third rostral segment whereas in *A. rigoensis* the rostral prongs are shorter than the third rostral segment. Also *A. biroi* lacks the short row of three small setae on the inner surface of the male anterior tarsi as found on the males of *A. rigoensis*.

Data on distribution.—Known only from type series.

Anisops rigoensis n. sp.

(Pl. LII, fig. 81)

Size.—Males, length 4.8 mm.-5.1 mm., greatest body width 1.3 mm.; females, length, 5.4 mm.-6.0 mm., greatest body width 1.3 mm.-1.5 mm.

Shape.—Small, fusiform species, with greatest body width about four tenths its body length.

Color.—General facies gray. Eyes gray or dark brown. Vertex, pronotum, and scutellum testaceous. The latter may be black and may have its hemelytral margins tinged with crimson. Hemelytra hyaline and appear dark gray, gray, or testaceous depending on the color of the underlying body surface. Legs stramineous. Abdominal venter black with keel and segmental margins of the connexivum stramineous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded, with its greatest width almost nine tenths the pronotal humeral width and eight to nine times the anterior width of the vertex; synthlipsis variable, from one fifth to one third the anterior width of the vertex; along the median longitudinal axis the head is equal to or longer than twice its median length; lateral margins diverging and slightly more than twice its median length; posterior margin convex, medianly emarginate. Facial tubercle only slightly raised. Labrum with its basal width slightly more than its median length. Rostral prong (Pl. LII, fig. 81b) slightly longer than the third rostral segment; apex acuminate. Stridulatory comb (Pl. LII, fig. 81c) of approximately twenty teeth; basal eight much shorter than others. Chaetotaxy of the front leg as shown on Plate LII. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	126	88	..
Middle leg	100	70	32	22
Hind leg	100	85	31	31

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head nine tenths the

pronotal humeral width and approximately seven times the anterior width of the vertex; synthlipsis narrow, between one fifth and one sixth the anterior width of the vertex; along the median longitudinal axis the head is three fourths the pronotal length. Pronotum with its humeral width slightly more than twice its median length; lateral margins diverging and slightly more than one half the median length; posterior margin concave, medianly emarginate. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	130	64	42
Middle leg	100	85	40	25
Hind leg	100	83	34	36

Location of types.—Male holotype, female allotype, three male and six female paratypes, New Guinea, Rigo, Luglio, 1889, L. Loria in the Snow Entomological Collection. Other paratypes are: one male, three females, New Guinea, Lemian Berlinhafen, '96, Biro and one female New Guinea, Friedrich-Wilh.-hafen, '96, Biro in the Kirkaldy collection of the Snow Entomological Collection.

Comparative notes.—Very similar to *Anisops birio* n. sp. and is separated best from this species on the character of the rostral prong, which in *A. biroi* extends its dorsal margin almost to the apex of the third rostral segment whereas in *A. rigoensis* the dorsal margin of the prong extends scarcely beyond the base. For comparison of the chaetotaxies of the front legs of the males see Pl. LII, fig. 81a and Pl. XLV, fig. 49a.

Data on distribution.—Known only from type series.

Anisops waltairensis n. sp.

(Pl. L, fig. 69)

Size.—Males, length 4.5 mm.-4.7 mm., greatest body width 1.2 mm.-1.4 mm.; females, length 4.8 mm.-5.1 mm., greatest body width 1.5 mm.-1.6 mm.

Shape.—Small, fusiform species; greatest body width about mid-way the body length.

Color.—General facies pale, may be stramineous or pearlaceous. Legs testaceous. Abdominal venter with keel and segmental margins of the connexivum stramineous or pearlaceous.

Male structural characteristics.—Viewed from above, the outline of the head is rounded with the greatest width almost nine tenths the pronotal humeral width and approximately eight times the anterior width of the vertex; synthlipsis narrow, about one eighth

the anterior width of the vertex; along the median longitudinal axis the head is nine tenths the pronotal length. Pronotum with humeral width two and one half times the median length; lateral margins diverging and slightly more than one half the median length; posterior margin convex, slightly concave medianly. Facial tubercle only slightly raised. Labrum long; median length equal to its basal width. Rostral prong (Pl. L, fig. 69b) slightly shorter than the third rostral segment; apex more or less acuminate. Stridulatory comb (Pl. L, fig. 69c) of approximately eleven teeth which increase in length toward the middle. Chaetotaxy of the male front leg as shown on Plate L. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	118	85	..
Middle leg	100	82	42	24
Hind leg	100	75	33	33

Female structural characteristics.—Viewed from above, the outline of the head is rounded; greatest width of head eight to nine tenths the pronotal humeral width and almost eight times the anterior width of the vertex; synthlipsis narrow, one seventh the anterior width of the vertex; along the median longitudinal axis the head is three fourths the pronotal length. Pronotum with humeral width two and one half times the median length; lateral margins diverging and slightly more than one half the median length; posterior margins convex, medianly concave. The relative lengths of the parts of the legs are as follows:

	Femur	Tibia	1st Tar. Seg.	2nd Tar. Seg.
Fore leg	100	116	57	32
Middle leg	100	80	40	20
Hind leg	100	85	37	30

Location of types.—Male holotype, female allotype, Waltair, India, I-27-21 in the Indian Museum. Paratypes are as follows. In the Indian Museum: two males, Kalka, Base of Simla Hills, 2400", VII-16-11, Mus. Collr.; one female, Kalka, base of Simla Hills, 2400", in small pond of rain water, Annandale. In the Snow Entomological Collection: one male, one female, Waltair, India, I-27-21; one male Kalka, Base of Simla Hills, 2400", VII-16-11, Mus. Collr.; one female Kalka, Base of Simla Hills, 2400", in small pond of rain water, Annandale.

Comparative notes.—About the same size and general appearance as *A. exigera* Horvath, from which it differs in having a much narrower synthlipsis, one eighth the anterior width of the vertex and

in having its rostral prong acuminate at the apex whereas in *A. exigera* the synthlipsis, though narrow is about one sixth the anterior width of the vertex and the rostral prong is truncate at the apex.

Data on distribution.—Known only from type series.

Anisops ali Distant

1911. *Anisops ali* Distant, The Entomologist, vol. 44, p. 107.

1933. *Anisops ali*, Lundblad, Arch. für Hydrob. Suppl., vol. XII, p. 146 (a list of Indo-australian and Pacific members of this genus).

As no specimens of this species were available for study I have chosen to present a copy of the original description.

“Ochraceous, the hemelytra more or less shaded with fuliginous; eyes black; interocular space narrow, margins parallel, not or very slightly narrowing at base, above with a distinct central longitudinal impression, the margins of which are ridged, beneath narrow, parallel, of the same breadth throughout; pronotum with a distinct waved carinate line on the anterior area, commencing on the lateral margins behind eyes and then roundly directed upward and united between the inner posterior angles of the eyes; abdomen beneath fuscous. This species is allied in general coloration to *A. sardea*, Herr.-Schaff., and *A. febri*, Kirk. From both of these, however, it is distinctly separated by the narrow parallel interocular space, and by the distinct carinate waved line to the pronotum. Long. 5 to 6½ millim.”

Hab. Ceylon; Diyatalawa (E. E. Green).

Location of types.—Female type located in the British Museum.

Anisops alluaudi Poisson

(Pl. LIII, fig. 85)

1945. *Anisops alluaudi* Poisson, Bull. Sec. Ent. France, vol. 50, pp. 92-93, text fig. 6.

This species was not present in the material at my disposal. Therefore I shall present a translation of the original description and copies of the drawings.

Anisops Alluaudi n. sp.

Vertex two times wider than the synthlipsis; head (eyes included) two times longer than its posterior width. Pronotum 1.8 times wider than long, its posterior margin concave. Scutellum 1.17 times longer than pronotum.

Eyes grayish brown; pronotum and scutellum brownish black, abdominal tergites, anterior and posterior black, the intermediate yellowish, bordered with black; hemelytra hyaline, not trimmed with red.

Male: Third rostral segment presenting the long lateral spurs.

Anterior leg: F-100, T-120, t-91, c-29.

The tibial comb composed of 10-12 spatulate teeth, regularly distributed; the tibia carries on its internal and lower side a short spine, there are three others, linearly distributed on the internal and basal side of the tarsi.

Length 7 mm.

Distribution: two males (1), La Reunion; Plaine des palmistes (Ch. Alluaud).

Location of types.—Type material destroyed during the war.

Anisops aphrodite Kirkaldy

1900. *Anisops aphrodite* Kirkaldy, Ann. Soc. Ent. Belgique, vol. XLIV, p. 435.

1905. *Anisops aphrodite*, Bergroth, and Shouteden. Ann. Soc. Ent. Belgique, vol. XLIX, pp. 388-389 (cites Kirkaldy's omission of this species from his "Uber Notonectiden" in 1904).

Kirkaldy (30) omitted this species from his Uber Notonectiden. Whether or not he considered it as a synonym of a previously described species or whether it was just an oversight on his part has been a question confronting all subsequent workers. The type material from Kinchassa is in the Perth Museum. As yet the species has not been redescribed and as the type material was unavailable to me I can present only a translation of the original description.

Anisops aphrodite.—Vertex approximately four times wider than the synthlipsis. Scutellum $\frac{3}{5}$ longer than the pronotum.

Male. Anterior tibia one-fifth longer than the femur and one fourth longer than the tarsus, the latter approximately three times as long as the claws which are shaped as fingers. Middle femur three eighths longer than the tibia, the latter three-eighths longer than the tarsus, first tarsal segment two-fifths longer than the second, the latter two times as long as the falciform claws.

Female. Anterior tibia one-sixth longer than the tarsus, first tarsal segment one-third longer than the second, the latter one-third longer than the claws. Middle tibia one-fourth longer than the tarsus, first tarsal segment one-third longer than the second, the latter two times as long as the falciform claws.

Male, female length. $5\frac{1}{4}$ mm., width $1\frac{1}{2}$ mm.

Kinchassa (Waelbroeck, Type), Lemba (Gilmont) and Boma (Tschoffen).

Hemelytra hyaline, transparent. Abdomen black above and beneath, genital segments flavus.

Anisops calcaratus Hale

1923. *Anisops calcaratus* Hale, Rec. South Australian Mus. vol. 11, no. 3, pp. 416-417, text fig. 369.

1933. *Anisops calcaratus*, Lundblad, Arch. für Hydrob. Suppl., vol. XII, p. 145 (a list of Indo-australian and Pacific members of the genus).

As no male specimens of this species were available for study I have chosen to present a copy of the original description.

Male. Head, including eyes, narrower than the pronotum; notocephalon with a median groove, which does not extend to hinder margin of the head and with a swelling on each side; synthlipsis less than 1.5 in vertex, 3.5 times in the width of an eye; notocephalic swellings united at the front of the head and continued on to face as a strong, median carina; eyes large, prominent, projecting slightly in front of vertex. Pronotum sordid testaceous, about 1.5 times wider than long, with a coarse, median carina reaching to posterior margin; lateral margins divergent; hinder edge evenly convex. Scutellum testaceous, wider than long, a little longer than the pronotum. Metanotum testaceous, with a black spot on each side; upper side of abdomen testaceous, posterior segments black. Anterior femora stout, the superior edge with a knife-like ridge, which gradually rises until it attains a point beyond the middle of the length of the thigh, where it abruptly terminates; summit of this ridge set with very small prostrate spines; tibiae strong, the anterior end of the inner face with a distinct spur, in the apex of which is set a short, stout spine; tarsi damaged. Length, nearly 9 mm.; width 2.4 mm.

Female. Eyes not so prominent, and notocephalon wider than in male. Synthlipsis 1.5 in vertex, 3 times in the width of an eye. Pronotum about twice as long, with a coarse, median carina, hinder margin convex. Scutellum pale yellow to orange; sometimes with a black spot on each side anteriorly; 1.5 times as long as the pronotum. Anterior femora not ridged on superior edge; anterior tibia one-fourth longer than the tarsi, the first tarsal segment nearly twice as long as the second, which is less than twice the length of the longest claw. Length, 8 mm. to 9.5 mm.; width 2.5 mm. to 3 mm.

Hab. South Australia; Bordertown (J. G. O. Tepper, type locality); Queensland: Cumnamulla (H. Hardcastle).

The type which is somewhat damaged, is the only male of this distinct species as yet received. The convex posterior margin of the pronotum distinguishes it from all other Australian forms, excepting possibly *A. endymion* Kirk.; in the description of the last named species the character of the hinder edge of the pronotum is not

stated but the synthlipsis is described as about half of the width of an eye and but slightly narrower than the vertex, while the pronotum is relatively longer and the scutellum shorter than in the female of *A. calcaratus*.

Location of types.—Male type located in the South Australian Museum.

Anisops canariensis canariensis Noualhier

1893. *Anisops canariensis* Noualhier, Ann. Soc. Ent. France, p. 18.

1899. *Anisops canariensis*, Puton, Rev. Ent., vol. XVIII, p. 80.

1904. *Anisops canariensis*, Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 117, 132.

1922. *Anisops canariensis*, Lindberg, Notulae Entomologicae, vol. II, pp. 47, 48, text fig. 4 (brief description and sketch of head).

1932. *Anisops canariensis*, Poisson, Bull. Soc. Ent. France, vol. XXVII, p. 42.

1948. *Anisops canariensis canariensis*, Poisson, Inst. Rech. Sahariennes Université D'Alger, p. 5, text figs. 14, b, d (pieces *A. perplexa* Poisson as a subspecies of *A. canariensis* Noualhier).

This species was not present in the material at my disposal. Therefore, I shall present a translation of the original.

Anisops canariensis n. sp.—Canary: pools of Tamaraceite, mountain stream between Tafira and San Lorenzo; Tenerife; Laguna.

Testaceous, very pale dorsally, with the elytra translucent. Ventrally, varies from black to testaceous. Head of male and female similar, the former having only the clypeus a little strumose. Eyes very large; their sides almost parallel, seen from above; as advanced as the frons (while, with *A. producta*, the frons is always visible in regarding the insect in profile, here it is the anterior border of the eye which forms, in this position, the anterior border of the head). Pronotum a good third shorter than the scutellum. The remainder, as with *A. producta*, from which in addition it distinguishes itself by the smaller size and the less pronounced dorsal body longitudinal curvature. Length 6½-7 mm.

Anterior tibiae enlarged, with a red tooth at the internal base.

Location of types.—Type material from the Canary Islands in the Paris Museum.

Anisops ciliata Stål

1868. *Anisops ciliatus* Stål, Öfver. Kongl. Vetén. Akad. Fordhandl., vol. VII, p. 137. (*nec Notonecta ciliata* Fabricius).

1898. *Anisops ciliata*, Kirkaldy, Annal. Mus. Civ. Stor. Nat. Genova, vol. XXXIX, p. 145 (determined in error; probably *A. pellucens*, Gerstaecker).

1933. *Anisops ciliata*, Lundblad, Arch. für Hydrob., Suppl. vol. XII, p. 164 (points out that *Notonecta ciliata* Fabricius is actually an *Enithares*).

This species was not present in the material at my disposal. Therefore, I shall present a translation of the original description.

Dirty, yellowish-white; with the penultimate joint of the rostrum

above, with all the last joint, the venter, all these dark, with a slanting white band before the coxae, connexivum spotted; ventral carina yellowish-white.

The head seen from above or from the side not projecting very far before the eyes, with the vertex and frons narrow, with the base, on this side below the middle rather narrow and almost equally broad, with that base very lightly furrowed. Thorax light, a little narrowed in front. Scutellum light. Hemelytra seen against the light, very lightly punctuated. The claws of the front tarsi somewhat short, the claw on the outside scarcely longer than the inner claw.

Very much akin to *Anisops australis*, with the back of the abdomen pale, with the head lightly furrowed, somewhat narrower vertex and frons, with thoracic carina broad, obtuse, missing in front, with anterior margin broadly angulate, apex projecting in a broad angle between the eyes (not truncate in the same place), with the exterior claw of the front tarsi scarcely longer than the inner claw.

Location of types.—Lundblad (*loc. cit.*) states that Stål's specimens of *Anisops ciliatus* which were in the Copenhagen Museum have been destroyed.

Remarks.—This species along with many others was inaccurately placed as a synonym of *Anisops nivea* (Fabricius) by Kirkaldy (*loc. cit.*). In an effort to clear up the confusion that has resulted it has been necessary to take these species out of synonymy and place them again as valid species. This I have done in regard to *Anisops ciliata*.

Anisops endymion Kirkaldy

1904. *Anisops endymion* Kirkaldy, Wiener Ent. Zeit., vol. XXIII, pp. 112, 132.

1923. *Anisops endymion*, Hale, Rec. South Australian Mus., vol. II, p. 417 (translation of the original description).

1924. *Anisops endymion*, Hale, Proc. Linn. Soc. New South Wales, vol. XLIX, pt. 4, p. 465 (believes that this species may be a *Paranisops* due to pronotal distortion between the eyes and pigmented hemelytra).

1933. *Anisops endymion*, Lundblad, Archiv. für Hydrob., Suppl. vol. XII, p. 145 (a list of Indo-australian and Pacific forms of this genus).

As no specimens of this species were available for study, I have chosen to present a translation of the original description.

Elytra ash-coloured, transparent; posterior half of exocorium and the clavus smoke-coloured, anterior half of clavus, basal margin of corium and the basal half of exocorium, black. Veins of wings pale. Metanotum brownish-black, lateral margins pale. Legs pale. Abdomen above dull, pale, in the centre black. Below black. Vertex longitudinally grooved, hardly broader on the anterior margin than

the synthlipsis, the breadth of the latter barely half the width of an eye.

Anterior margin of the pronotum between the eyes much more distorted than in other species (the distorted portion rounded anteriorly); pronotum three-fourths broader than its length, one-half times longer than the scutellum. Anterior and middle tibiae flat and laterally expanded, broader at apex than at base; one-fifth times longer than tarsi, first tarsal segment two-fifths longer than the other, which is two and a half times as long as the claw. Length, 9 mm.; breadth, 3 mm.

Hab. Australia: Swan River (Perth Museum, Scotland).

Only a single female of this distinct species is before me.

Anisops hyalina Fieber

1851. *Anisops hyalinus* Fieber, Abhandl. Konigl. Bohm. Gesells. Wiss., vol. V, pt. 7, p. 482.

This species was not present in any of the material at my disposal, so I have chosen to present a translation of the original description.

1. *A. hyalinus* m.

Back yellowish, basal and two end segments blackish. Upperside of the anterior and middle femora black brown.

From east India (Helfer, Mus. Berol.)

Length 4- $\frac{2}{3}$ -5 Lin. Dirty whitish yellow. Head almost truncate in front. Vertex with a longitudinal furrow. Eyes approach one another at the synthlipsis. Vertex very narrow, triangularly elongate at the end. Third rostral segment as above, fourth entirely brown black. Scutellum triangular, sides of equal length, sides curved. The entire upperside finely punctate, fine and long curly pubescence. Mesa- and meta-sternites black brown as the coxa. Tibia and outer margin of the femora heavily haired. Abdomen black, anal segment yellowish white, the penultimate segment with yellowish spot. Median keel, a white spot in the lateral furrows upon each segment. Connexivum with brown spots.

Bibliographical notes.—Stål (39) in 1868 indicated that this species might be a synonym of *A. ciliata* Stål, and likewise Kirkaldy (30) placed this species as a possible synonym of *A. nivea* (Fab.). Both workers were incorrect, and due to the confusion that existed in regard to *A. nivea* no taxonomist has redescribed the species, though Esaki (7) pointed out that it was not a synonym of *A. nivea* and that Kirkaldy had been mistaken. Whether or not the type is still in the museum as mentioned by Fieber is questionable. It may no longer be in existence.

Comparative notes.—The extremely large size (about 10 mm. a line being one twelfth of an inch) places it within a very small group. However, none of the species of that size have the triangularly elongate vertex as noted by Fieber. *Anisops sardea* H.-S. which is the largest of the species possessing a cephalic horn, is described by Fieber in the same paper as *Anisops productus*. It, however, does not have the narrow vertex as possessed by *A. hyalinus*. The author of this species does not mention whether or not he was describing a female, but nevertheless this species was not present in the vast Indian material I had for study.

Anisops lanceolata Poisson

(Pl. LIII, fig. 87)

1949. *Anisops lanceolata* Poisson, Rev. Francaise Ent., vol. XV, p. 168, text figs. 7A, B, C, D, E.

This species was not present in the material at my disposal. Therefore, I shall present a translation of the original description and copies of the figures.

Anisops lanceolata n. sp.

Body elongate, fusiform. General pigmentation of a flavus yellow with the hemelytra of uniform color, hyaline, transparent and shining. Synthlipsis very narrow in the two sexes; narrower on the males than on the females (about ten to eleven times narrower than the anterior width of the vertex). Scutellum a little longer medianly than the pronotum.

Male: anterior leg, femur—62, tibia—63, tarsus—40, claws—13.

Tibial comb of disassociated elements, irregularly arranged and unequally developed; one or two elements of the comb bifurcated.

Third rostral segment with developed spurs (rostral prong) and profoundly striated on the external border.

Length 6.8 mm.; 6.9 mm.

Distr. one male, one female; Crater of Monoun.

Location of types.—Types located in Poisson's collection.

Comparative notes.—This species with its very narrow synthlipsis, shape of the anterior male femur, peculiar stridulatory comb and the male pronotum with its lateral margins almost parallel is strongly suggestive of a close relationship with *Anisops breddeni* Kirkaldy from which it differs in not having the eyes of the males holoptic.

Anisops letitia Hutchinson

(Pl. LIII, fig. 88)

1929. *Anisops letitia* Hutchinson, Ann. South African Mus., vol. XXV, pt. 3, pp. 385-386, Pl. XXIX, fig. 11; Pl. XXXI, fig. 3.

This species was not present in the material at my disposal. Therefore, I shall present a copy of the original description and copies of the figures.

Anisops letitia n. sp.

Yellowish-white, with apical part of dorsum abdominis and venter abdominis dark.

Fusiform, less than four times as long as wide, broadest before the middle, at about the first fourth of the elytra; pronotum narrower than the greatest width of the body, but slightly wider than that of the head and eyes.

Head and eyes large; notocephalon with a longitudinal depression between two slightly swollen areas along its anterior half, not reaching vertex and spreading out posteriorly before another indefinite raised area. Facial tubercle well marked and often impressed at the sides. Vertex about one fourth as wide as head and eyes and two and one half to three and one half times as wide as the synthipsis. Pronotum smooth with a few pale hairs, less than twice as wide as long, longer than the scutellum in some species (type) shorter in others, carinated posteriorly, the carina not reaching the posterior margin and variably produced anteriorly; posterior margin convex, or at most slightly flattened, not sinuate or emarginate.

Scutellum fairly rugosely punctured.

Male: Third joint of rostrum with short prongs.

Anterior tibia just over one-half as long again as the tarsus, which is about two and one-half times as long as the longer claw. Tibia rather flattened, anterior margin with three spinous hairs basally, posterior margin with two of its basal hairs elongate.

Stridulatory comb very small, about one-twentieth of the length of the tibia, subparallel sided, of about sixteen lamellae. Tarsus with a spinous hair and a few very small peg-like hairs basally.

Intermediate tibia just under two and one-third times as long as the first (1 and 2) tarsal joint, which is about one and one-fourth to one and one-half times as long as the third; the latter about twice as long as the longer claw.

Posterior tibia one and one-third times as long as the tarsus.

Female: Eyes slightly less prominent than in the male.

Anterior tibia slightly shorter than in males, nearly two and one-

half times as long as the first (1 and 2) tarsal joint, which is about one-half as long again as the second longer claw, rather over one-half as long as the latter.

Intermediate tibia just over twice as long as the first (1 and 2) tarsal joint, which is just under one and one-fourth times as long as the third, the latter being about two and three-fifths as long as the longer claw.

Posterior tibia about one and one-third as long as the tarsus.

Length: 8-9 mm.

Cape; Hovieson's Poort, near Grahanstown.

This very distinct species may be recognized at once by the convex or straight posterior border to the elytra and the small stridulatory comb. It is evidently very local.

Location of types.—Type material located in the South African Museum.

Comparative notes.—This species together with *A. pellucens* Gerst. are the two largest species known from South Africa. However, they are easily separated from one another on the basis of the pronotum which in *A. letitia* is not medianly emarginate as in *A. pellucens*. The synthlipsis of *A. letitia* is less than one half the anterior width of the vertex whereas in *A. pellucens* the synthlipsis is more than one half the anterior width of the vertex.

Anisops mauricensis Poisson

(Pl. LIII, fig. 86)

1945. *Anisops mauricensis* Poisson, Bull. Soc. Ent. France, vol. 50, p. 93, text fig. 7.

This species was not present in the material at my disposal. Therefore, I shall present a translation of the original description and copies of the figures.

Anisops mauricensis n. sp.

Vertex four times wider than the synthlipsis on the males and 2.5 times wider on the females. Head (eyes included) 1.3 times wider than it is long up to the synthlipsis. Pronotum 1.3 times wider than long. Scutellum 1.7 times longer than the pronotum.

General color yellowish brown. Abdominal sternites black in the same way as the metanotum. Lateral spur of the third rostral segment almost two times longer than the body of the segment. Anterior tibia 1.6 times longer than the tarsi; the tibial comb carries 23-24 elongate teeth and the chaetotaxy of the tibia is composed in particular of a short spine on the internal apical surface, followed by three others on the tarsi.

Length 6.5 mm.

Distribution: one male, two females, Ile Mauritius, Curepipe (Ch. Alluaud, 1897).

Observation: The species appears similar to *A. cananariensis* Noualhier, but is differentiated, in particular, by the extreme narrowness of the synthlipsis.

Location of types.—Type material located in Poisson's collection.

Anisops meulenaerei Poisson

(Pl. LIII, fig. 89)

1940. *Anisops meulenaerei* Poisson, Bull. Mus. Royal Hist. Nat. Belgique, vol. XVI, no. 27, pp. 8-10, text figs. 9, 10, 11, 12.

This species was not present in the material at my disposal. Therefore, I shall present a translation of the original description and copies of the figures.

Anisops meulenaerei n. sp.

General pigmentation flavus.

Back of the abdomen flavus, with the margins of the tergites black. Hemelytra hyaline and transparent. Eyes globose and slate colored. Synthlipsis two times narrower than the anterior width of the vertex. Pronotum 1.5 to 1.6 times wider than long; 2.85 times longer than the scutellum. Third rostral segment provided with short spurs.

Anterior leg: claws 3.6 times shorter than the tarsi, which is 1.6 times shorter than the tibia and 1.1 times shorter than the femur; the latter segment being itself 1.4 times shorter than the tibia.

Stridulatory apparatus with 23 long teeth and associated with a strong, spiny tubercle situated at the beginning of a row of seven long bristles. A strong spine at the extremity (tarsal) of the anterior femur. The anterior tarsus carries five spines distributed regularly.

Length 9.5 mm., width 2.5-2.75 mm.

Distribution: Ethiopia, Goba: one male, 1934-35 (R. de Meulenaerei), Mus. Roy. Hist. Belgian. 10,738 (type).

Comparative notes.—This species appears to be similar to *Anisops ares* Hutchinson, from which it differs primarily in the chaetotaxy of the male front leg as the latter species lacks the spur adjacent to the stridulatory comb and also in the shape of the anterior male femur which is parallel for its entire length with the apex rounded while in *A. ares* Hutch. only the basal three-fourths is parallel.

Anisops milloti Poisson

(Pl. LIV, fig. 90)

1948. *Anisops milloti* Poisson, Mem. Inst. Scient. Madagascar, Serie A, vol. 1, p. 109, text figs. 20, A, B.

This species was not present in the material at my disposal. Therefore, I shall present a translation of the original description and copies of the figures.

Anisops (A) *milloti* n. sp.

General color flavus (after standing in alcohol at 70 degrees), eyes dark maroon. Abdominal sternites dark brown. Body very fusiform. Head including the eyes, slightly wider than the pronotum and, viewed dorsally, a little shorter than the pronotum (1.13 times shorter); pronotum 1.10 times shorter than the scutellum and nearly two times wider at the base than its median length. Synthlipsis four times narrower than the anterior width of the vertex. Facial tubercle very prominent, overhanging the base of the rostrum. Appendages of the third rostral segment well developed and rounded at their extremity. Anterior tibia and middle tibia rather dilated and flattened.

Male, anterior leg: femur—22, tibia—37.5, tarsus—23, claws—13.

Stridulatory comb rather well developed, represented by a groove embellished with long thin bristles and with 7-8 spatulate setae.

Distribution: Three males Angavokely, Madagascar.

Comparative notes: The ventral projection of the facial tubercle is suggestive of the similar condition found on the males of *A. wakefieldi* White, however, in the latter case the projection is strongly acuminate and not truncate as in this species. Also the rostral prongs of the third rostral segment of the males of *A. wakefieldi* are very short, only about one-fourth the length of the third rostral segment whereas those of *A. milloti* appear to be at least as long as the third rostral segment.

Location of types.—Type material located in Poisson's collection.

Anisops ocularis Hale

1923. *Anisops ocularis* Hale, Rec. South Australian Mus. vol. II, no. 3, pp. 412-413, text fig. 366.

1933. *Anisops ocularis*, Lundblad Arch. für Hydrob. Suppl. vol. XII, p. 145 (a list of Indo-australian and Pacific forms of this genus).

This species was not present in the material at my disposal. Therefore, I shall present a translation of the original description.

Head, including the large and prominent eyes, very slightly narrower than the pronotum; notocephalon with a swelling on each

side, not reaching to base of head, converging at vertex and continued as median carina on to the very narrow face; synthlipsis about 1.5 in vertex, 5 times in the width of an eye. Pronotum pale testaceous; as long as the head, twice as wide as long, with a feeble median carina, which disappears posteriorly; hinder edge slightly concavely incised. Scutellum testaceous, with a large, pale triangular patch near each anterior angle; wider than long, and about 1.25 times as long as the pronotum. Metanotum testaceous; upperside of abdomen pale, with the posterior segments in parts black. Underside of abdomen black, ventral carina and lateral edges ochraceous. Anterior tibiae much expanded, the greatest width (near the base) being .3 of the length; anterior tarsi 1.6 times in tibiae, 3 times longer than the longer claw. Length, 8 mm.; width, 2.5 mm.

Hab. Northern Territory: Darwin (W. K. Hunt).

The type is the only representative of this species before me. As in *A. doris*, the eyes are large, the notocephalon is narrow, and the pronotum is short; it differs, however, in the wider synthlipsis, the markedly more robust form, the much more expanded anterior tibiae of the male, etc. It resembles Distant's description and figure of *A. cleopatra* from New Caledonia, but in that species the synthlipsis is "not more than half" as wide as the vertex and the size is smaller.

Location of types.—Male type located in the South Australian Museum.

Anisops pugnax Poisson

(Pl. LIV, fig. 92)

1945. *Anisops pugnax* Poisson, Bull. Soc. Ent. France, vol. 50, p. 94, text fig. 8.

This species was not present in the material at my disposal. Therefore, I shall present a translation of the original description and copies of the figures.

Anisops pugnax n. sp.

Female: vertex 1.7 times wider than the synthlipsis. Head 2.5 times wider than long. Pronotum 2.3 times wider than long; its posterior margin slightly concave. Scutellum 1.2 times shorter than its basal width and 1.5 times longer than the pronotum.

Vertex, pronotum as well as the legs, yellowish. Scutellum black. Scutellar border of the hemelytra as well as the internal margin of the hemelytral pit, trimmed with carmin. Metanotum and the last abdominal tergites black, the others yellowish; abdominal sternites black.

Male: anterior tibia 1.2 times longer than the tarsus. The tibial comb is formed of 12 irregular teeth.

Length: 7.5 mm.—male; 8 mm.—female.

Distribution: one male, one female, Mt. Kenia (C. & N. O.); lower zone, prairies, 2000m. (C. Alluaud. 1908).

Location of types.—Types destroyed during the war.

Comparative notes.—The cylindrical distinct teeth of the stridulatory comb are similar to those found in *A. adonis* though in the latter case there are approximately seven instead of the twelve of *A. pugnax*. This species is much larger than *A. adonis* and the anterior male tibia is one and two tenths the length of the anterior tarsus whereas the anterior male tibia of *A. adonis* is one and one half the length of the fore tarsus.

Anisops worthingtoni Jaczewski

(Pl. LIV, fig. 91)

1933. *Anisops worthingtoni* Jaczewski, Linn. Soc. Jour., vol. XXXVIII, pp. 343-345, text figs. 1, 2, 3, 4, 5.

1935. *Anisops worthingtoni*, Poisson, Mus. Nat. Hist. Nat. vol. III, p. 211, fig. 25, a, b (ecological note).

This species was not present in the material at my disposal. Therefore, I shall present a copy of the original description and copies of the figures.

Anisops (Anisops) worthingtoni sp. n.

Lake Rudolf, stn. 280, 1 male, 1 female.

Length 6.5 mm. Yellowish white, fairly slender.

Head of the male produced in front into a distinct prominence, resembling that of the Australasian *A. feberi* Kirk. (Hale, 1923), much smaller, however, than the cephalic prominence in *A. sardea* H. S. At its apex some elongated dark hairs are inserted. Face of the male flattened. Head of the female simple, vertex forming a very slight, but easily discernible convex prominence between the eyes, when seen from above. Vertex in both sexes a little over three times as wide as the synthlipsis. Rostral prongs of the males moderately divergent.

Trochanter of the front legs of the male armed with two groups of short, slightly curved pegs, one at the basal prominence, the other at the lower margin. Tibial prong with about fifteen lamellae. Outer margin of the tibia with two thickened spines and a short peg inserted more distally. Inner margin with three long basal bristles and a number of shorter ones. Tarsal joint with a continuous row of short spines along its outer margin. Tibia one and one-fourth

times as long as the tarsus, which is twice as long as the longer claw.

Sinistral spine of the seventh abdominal segment of the male thickened in its basal portion, curved and tapering towards the apex. Parameres as shown in the text figure.

This species differs at once from all other African representatives of the genus by the structure of the head and of the front legs in the males, the females may be recognized by their slightly prominent vertex.

I have pleasure in dedicating this species to Dr. E. B. Worthington, its discoverer.

Location of types.—Type material in Cambridge Museum.

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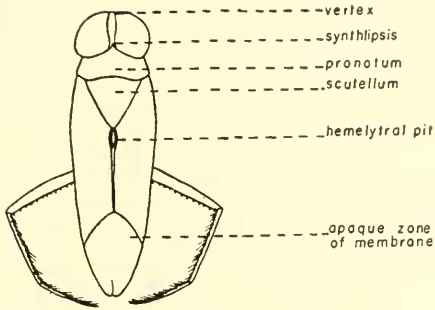
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PLATE XXXVI

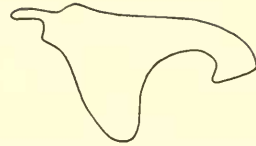
FIGURE

1. Male *Anisops*—dorsal view.
2. Male *Anisops*—ventral view.
3. Left genital clasper.
4. Right genital clasper.
5. *Anisops elstoni* n. sp.
 - 5a. Inner surface view of male left fore leg.
 - 5b. Left lateral view of third and fourth male rostral segments.
 - 5c. Enlarged view of left stridulatory comb.
6. *Anisops amaryllis* Hutchinson.
 - 6a. Inner surface view of male left fore leg.
 - 6b. Left lateral view of third and fourth male rostral segments.
 - 6c. Enlarged view of left stridulatory comb.
7. *Anisops agalia* Hutchinson.
 - 7a. Inner surface view of male left fore leg.
 - 7b. Enlarged view of left stridulatory comb.

PLATE XXXVI



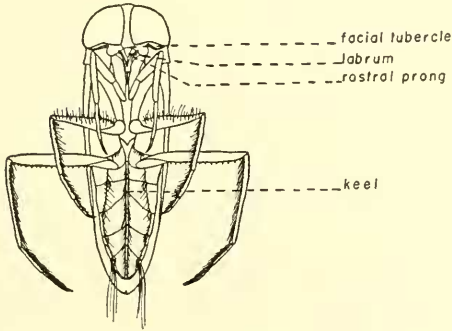
1. MALE ANISOPS (dorsum)



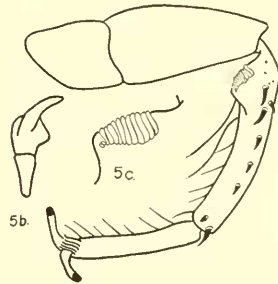
3. LEFT GENITAL CLASPER



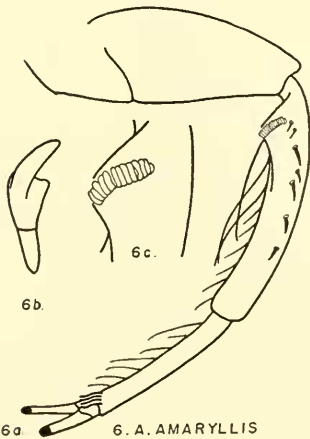
4. RIGHT GENITAL CLASPER



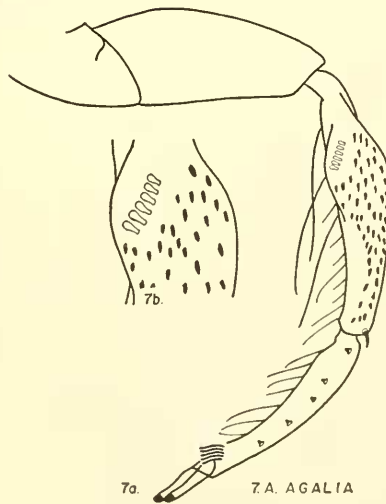
2. MALE ANISOPS (venter)



5. A. ELSTONI



6. A. AMARYLLIS



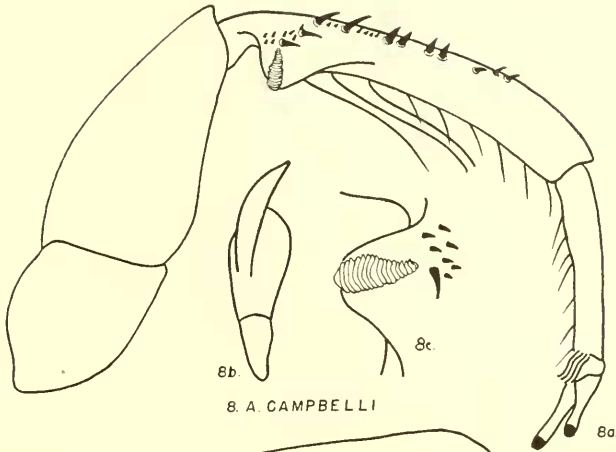
7. A. AGALIA

PLATE XXXVII

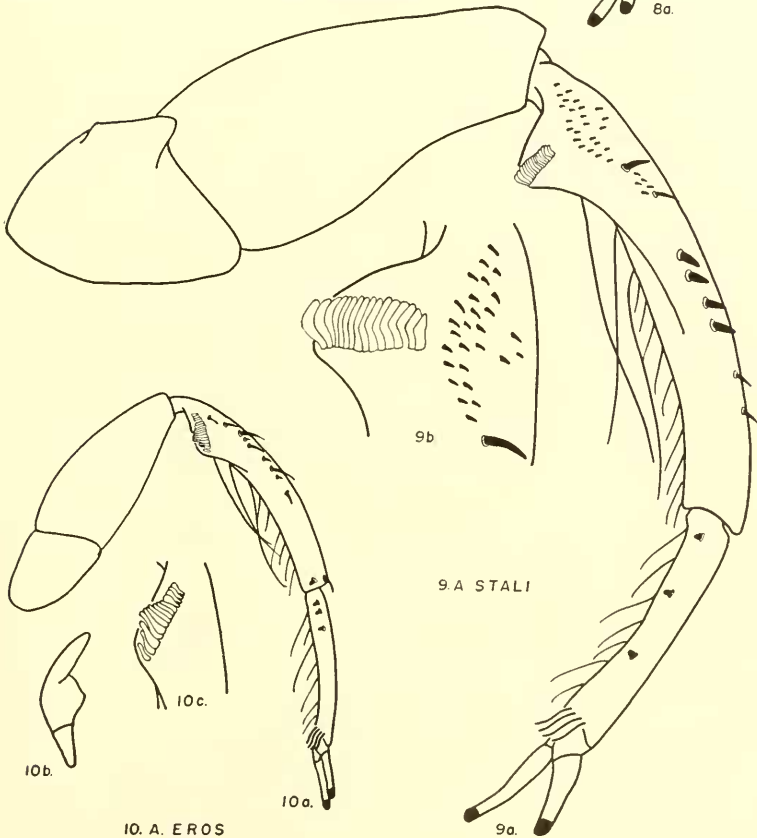
FIGURE

8. *Anisops campbelli* n. sp.
 - 8a. Inner surface view of male left fore leg.
 - 8b. Left view of third and fourth male rostral segments.
 - 8c. Enlarged view of left stridulatory comb.
9. *Anisops stali* Kirkaldy.
 - 9a. Inner surface view of male left fore leg.
 - 9b. Enlarged view of left stridulatory comb.
10. *Anisops eros* Hutchinson.
 - 10a. Inner surface view of male left fore leg.
 - 10b. Left view of third and fourth male rostral segments.
 - 10c. Enlarged view of left stridulatory comb.

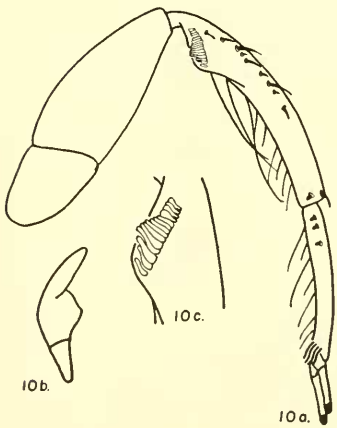
PLATE XXXVII



8. A. CAMPBELLI



9. A. STALI



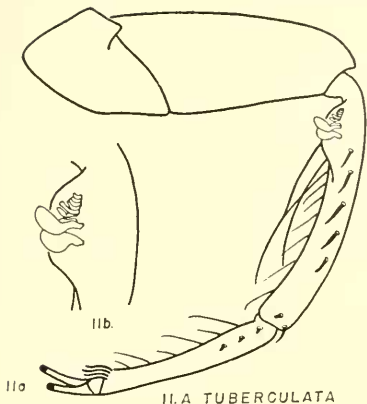
10. A. EROS

PLATE XXXVIII

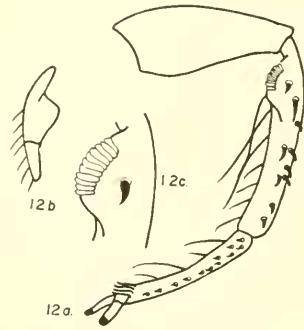
FIGURE

11. *Anisops tuberculata* Poisson.
 - 11a. Inner surface view of male left fore leg.
 - 11b. Enlarged view of left stridulatory comb.
12. *Anisops paracrinita* n. sp.
 - 12a. Inner surface view of male left fore leg.
 - 12b. Left view of third and fourth male rostral segments.
 - 12c. Enlarged view of left stridulatory comb.
13. *Anisops hackeri* n. sp.
 - 13a. Inner surface view of male left fore leg.
 - 13b. Left view of third and fourth male rostral segments.
 - 13c. Enlarged view of left stridulatory comb.
14. *Anisops nodulata* n. sp.
 - 14a. Inner surface view of male left fore leg.
 - 14b. Left view of third and fourth male rostral segments.
 - 14c. Enlarged view of left stridulatory comb.
15. *Anisops kampalensis* Hutchinson.
 - 15a. Inner surface view of male left fore leg.
 - 15b. Left view of third and fourth male rostral segments.
 - 15c. Enlarged view of stridulatory comb.
16. *Anisops hyperion* Kirkaldy.
 - 16a. Inner surface view of male left fore leg.
 - 16b. Left view of third and fourth male rostral segments.
 - 16c. Enlarged view of left stridulatory comb.

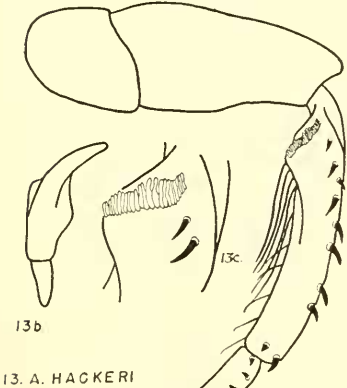
PLATE XXXVIII



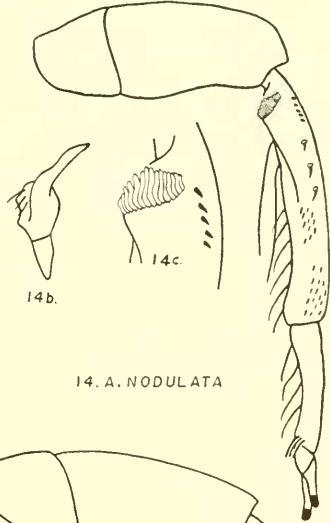
11.A. TUBERCULATA



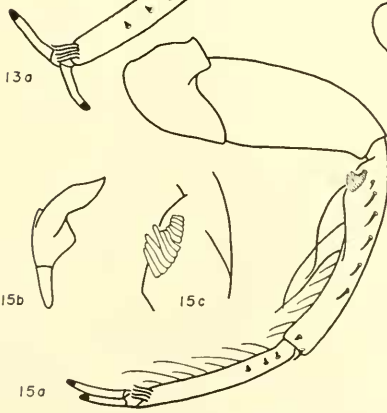
12. A. PARACRINITA



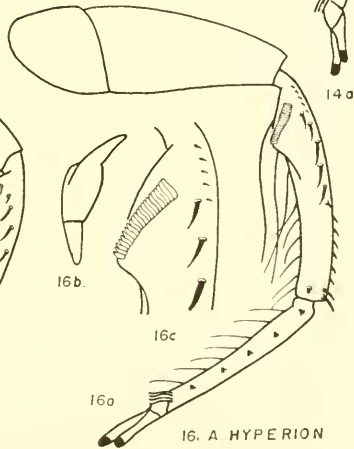
13. A. HACKERI



14. A. NODULATA



15.A. KAMPALENSIS



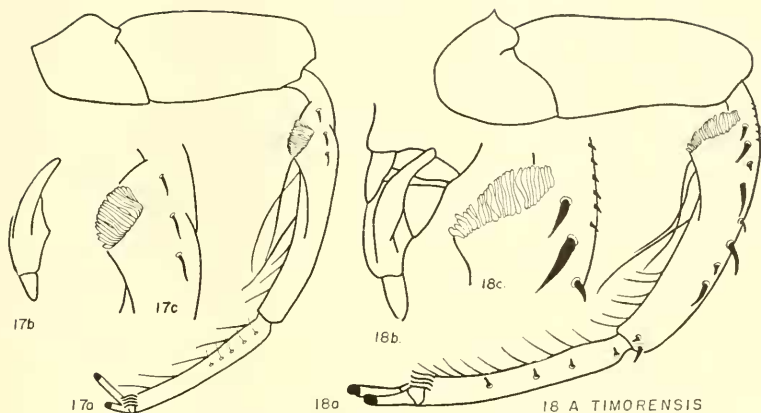
16. A. HYPERION

PLATE XXXIX

FIGURE

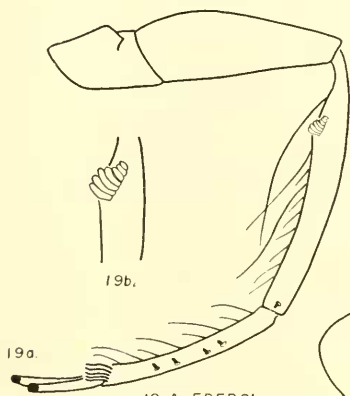
17. *Anisops apicalis* Stål.
 - 17a. Inner surface view of male left fore leg.
 - 17b. Left view of third and fourth male rostral segments
 - 17c. Enlarged view of left stridulatory comb.
18. *Anisops timorensis* n. sp.
 - 18a. Inner surface view of male left fore leg.
 - 18b. Left view of male rostrum.
 - 18c. Enlarged view of left stridulatory comb.
19. *Anisops edepol* Kirkaldy.
 - 19a. Inner surface view of male left fore leg.
 - 19b. Enlarged view of left stridulatory comb.
20. *Anisops canariensis perplexa* Poisson.
 - 20a. Inner surface view of male left fore leg.
 - 20b. Left view of third and fourth male rostral segments.
 - 20c. Enlarged view of left stridulatory comb.
21. *Anisops coutierei* n. sp.
 - 21a. Inner surface view of male left fore leg.
 - 21b. Left view of third and fourth male rostral segments.
 - 21c. Enlarged view of left stridulatory comb.
22. *Anisops occipitalis* Breddin.
 - 22a. Inner surface view of male left fore leg.
 - 22b. Left view of third and fourth male rostral segments.
 - 22c. Enlarged view of left stridulatory comb.

PLATE XXXIX

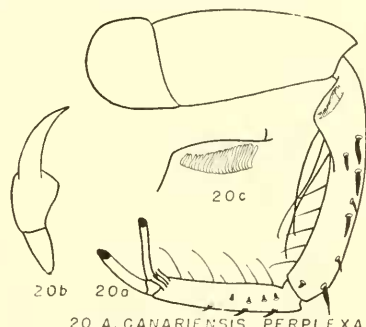


17 A. APICALIS

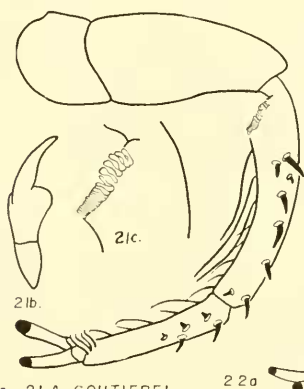
18 A. TIMORENSIS



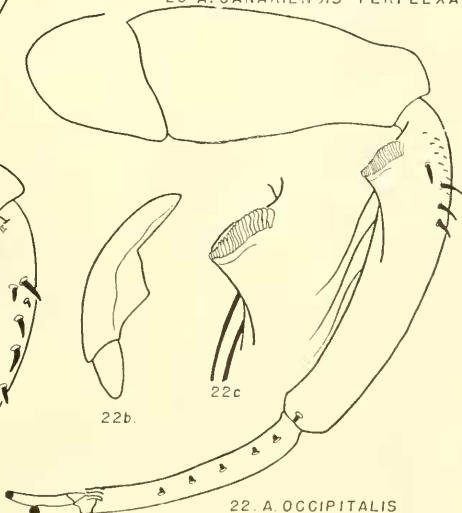
19 A. EDEPOL



20 A. CANARIENSIS PERPLEXA



21 A. COUTIEREI



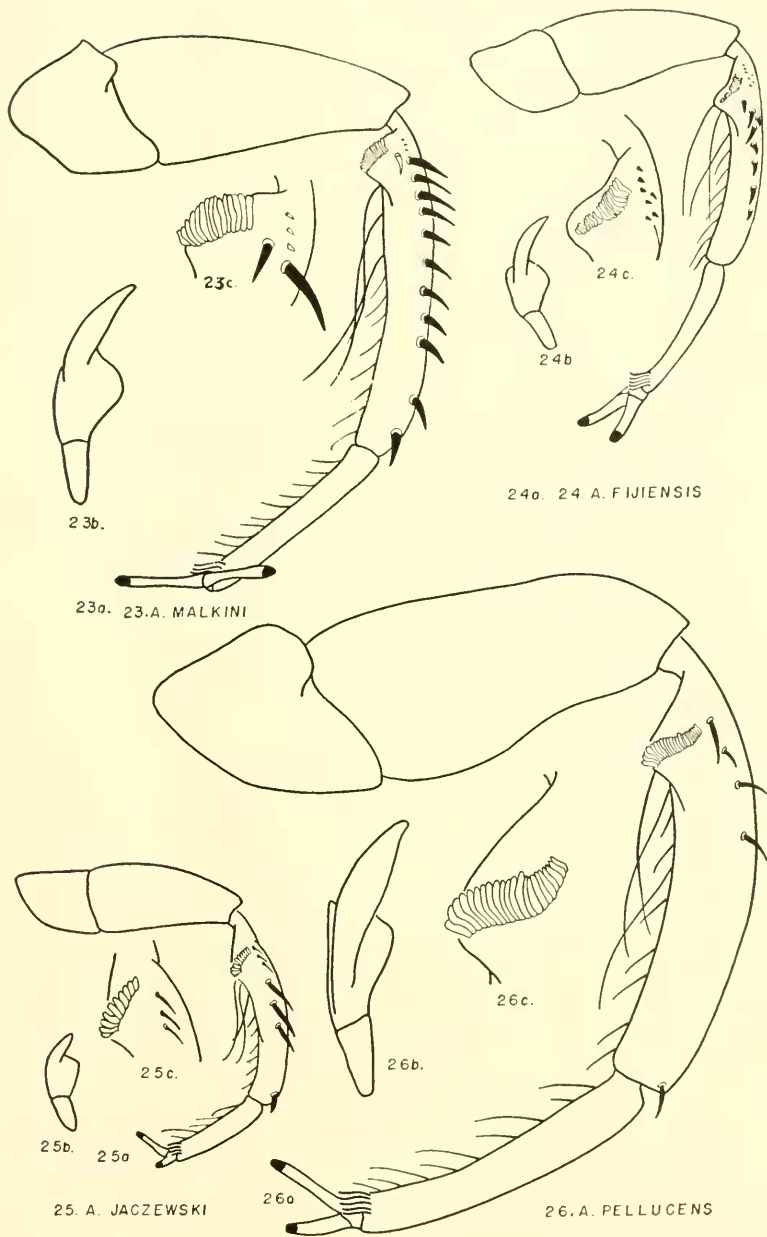
22 A. OCCIPITALIS

PLATE XL

FIGURE

23. *Anisops malkini* n. sp.
 - 23a. Inner surface view of male left fore leg.
 - 23b. Left view of third and fourth male rostral segments.
 - 23c. Enlarged view of left stridulatory comb.
24. *Anisops fijiensis* n. sp.
 - 24a. Inner surface view of male left fore leg.
 - 24b. Left view of third and fourth male rostral segments.
 - 24c. Enlarged view of left stridulatory comb.
25. *Anisops jaczewski* Hutchinson.
 - 25a. Inner surface view of male left fore leg.
 - 25b. Left view of third and fourth male rostral segments.
 - 25c. Enlarged view of left stridulatory comb.
26. *Anisops pellucens* Gerstaecker.
 - 26a. Inner surface view of male left fore leg.
 - 26b. Left view of third and fourth male rostral segments.
 - 26c. Enlarged view of left stridulatory comb.

PLATE XL



23b.

23a. 23.A. MALKINI

24a. 24 A. FIJIENSIS

25b.

25a. 25. A. JACZEWSKI

26b.

26a. 26.A. PELLUCENS

PLATE XLI

FIGURE

27. *Anisops evansi* n. sp.
 - 27a. Inner surface view of male left fore leg.
 - 27b. Left view of third and fourth male rostral segments.
 - 27c. Enlarged view of the left stridulatory comb.
28. *Anisops gobana* Poisson.
 - 28a. Inner surface view of male left fore leg.
 - 28b. Left view of third and fourth male rostral segments.
 - 28c. Enlarged view of the left stridulatory comb.
29. *Anisops adonis* Hutchinson.
 - 29a. Inner surface view of male fore leg.
 - 29b. Left view of third and fourth male rostral segments.
 - 29c. Enlarged view of the left stridulatory comb.
30. *Anisops robusta* Hutchinson.
 - 30a. Inner surface view of male fore leg.
 - 30b. Left view of third and fourth rostral segments.
 - 30c. Enlarged view of the left stridulatory comb.

PLATE XLI

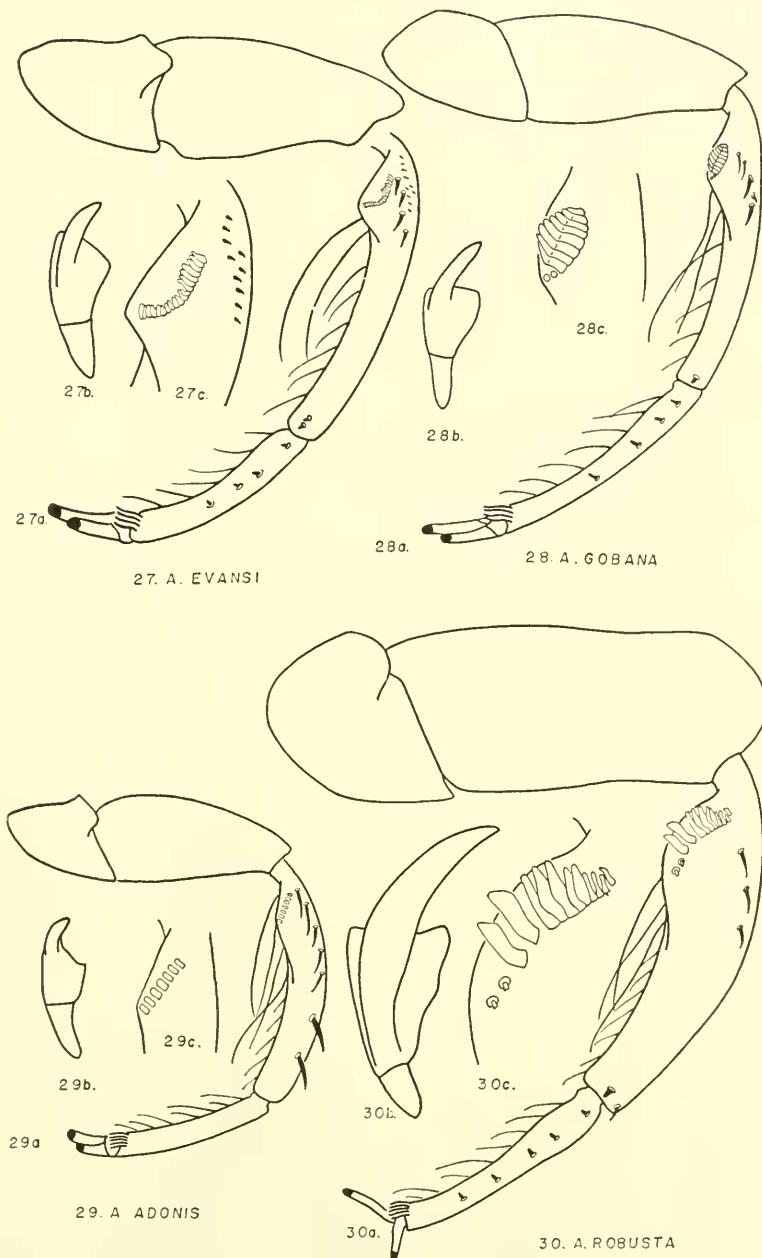
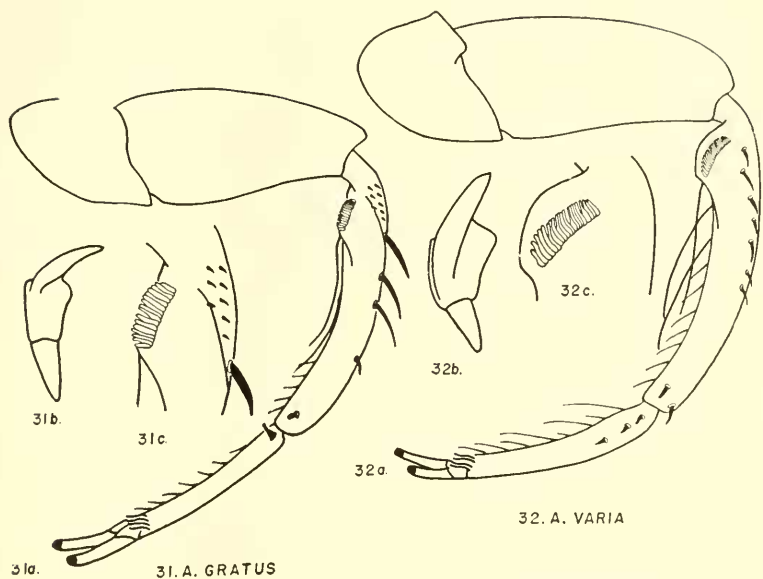


PLATE XLII

FIGURE

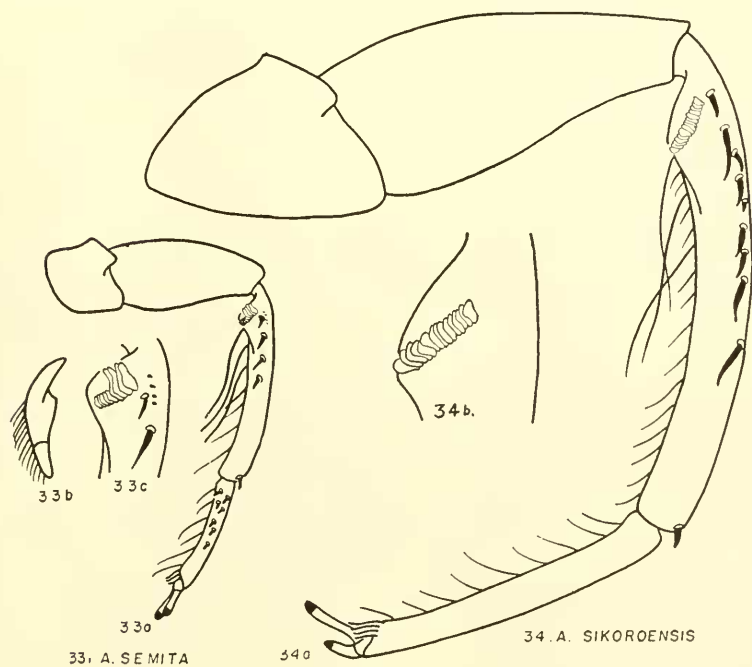
31. *Anisops gratus* Hale.
 - 31a. Inner surface view of male left fore leg.
 - 31b. Left view of third and fourth male rostral segments.
 - 31c. Enlarged view of left stridulatory comb.
32. *Anisops varia* Fieber.
 - 32a. Inner surface view of male left fore leg.
 - 32b. Left view of third and fourth male rostral segments.
 - 32c. Enlarged view of left stridulatory comb.
33. *Anisops semita* n. sp.
 - 33a. Inner surface view of male left fore leg.
 - 33b. Left view of third and fourth male rostral segments.
 - 33c. Enlarged view of left stridulatory comb.
34. *Anisops sikorensis* n. sp.
 - 34a. Inner surface view of male left fore leg.
 - 34b. Enlarged view of left stridulatory comb.

PLATE XLII



31. A. GRATUS

32. A. VARIA



33. A. SEMITA

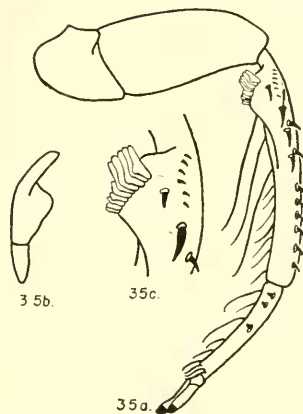
34. A. SIKOROENSIS

PLATE XLIII

FIGURE

35. *Anisops canaliculata* n. sp.
 - 35a. Inner surface view of male left fore leg.
 - 35b. Left view of third and fourth male rostral segments.
 - 35c. Enlarged view of left stridulatory comb.
36. *Anisops genji* Hutchinson.
 - 36a. Inner surface view of male left fore leg.
 - 36b. Left view of third and fourth male rostral segments.
 - 36c. Enlarged view of left stridulatory comb.
37. *Anisops lipovskyi* n. sp.
 - 37a. Inner surface view of male left fore leg.
 - 37b. Left view of third and fourth male rostral segments.
 - 37c. Enlarged view of left stridulatory comb.
38. *Anisops psyche* Hutchinson.
 - 38a. Inner surface view of male right fore leg minus the tarsus.
 - 38b. Left view of third and fourth male rostral segments.
 - 38c. Enlarged view of right stridulatory comb.
39. *Anisops nivea* (Fabricius).
 - 39a. Inner surface view of male left fore leg.
 - 39b. Enlarged view of left stridulatory comb.
40. *Anisops tahitiensis* Lundblad.
 - 40a. Inner surface view of male left fore leg.
 - 40b. Left view of third and fourth male rostral segments.
 - 40c. Enlarged view of left stridulatory comb.

PLATE XLIII

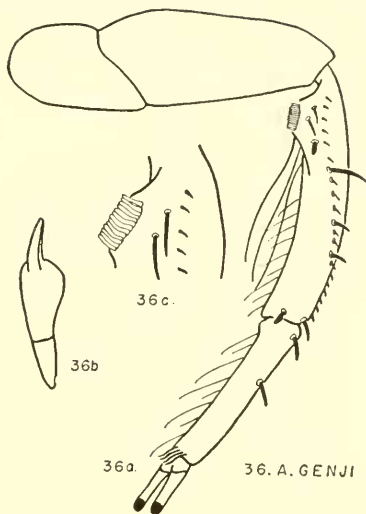


35b.

35c.

35a.

35. A. CANALICULATA

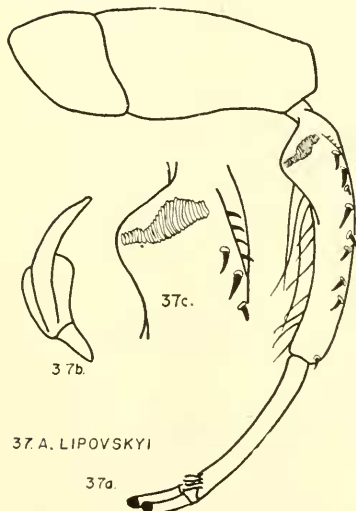


36b

36c.

36a.

36. A. GENJI

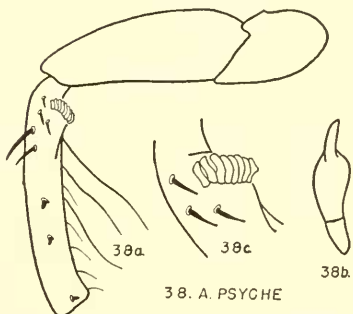


37b.

37c.

37a.

37. A. LIPOVSKYI

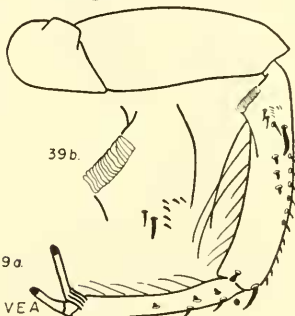


38a.

38c.

38b.

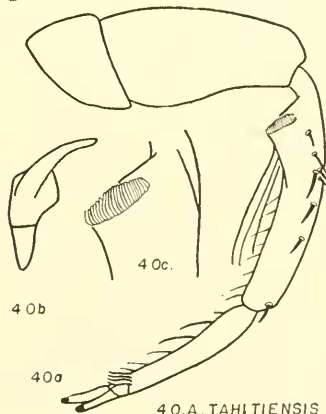
38. A. PSYCHE



39b.

39a.

39. A. NIVEA



40b

40c.

40a

40. A. TAHITIENSIS

PLATE XLIV

FIGURE

41. *Anisops praetexta* Hutchinson.
 - 41a. Inner surface view of male left fore leg.
 - 41b. Left view of third and fourth male rostral segments.
 - 41c. Enlarged view of left stridulatory comb.
42. *Anisops barrenensis* n. sp.
 - 42a. Inner surface view of male left fore leg.
 - 42b. Left view of third and fourth male rostral segments.
 - 42c. Enlarged view of left stridulatory comb.
43. *Anisops cleopatra* Distant.
 - 43a. Inner surface view of male left fore leg.
 - 43b. Left view of rostrum.
 - 43c. Enlarged view of left stridulatory comb.
44. *Anisops philippinensis* n. sp.
 - 44a. Inner surface view of male left fore leg.
 - 44b. Left view of third and fourth male rostral segments.
 - 44c. Enlarged view of left stridulatory comb.
45. *Anisops dcanei* n. sp.
 - 45a. Inner surface view of male left fore leg.
 - 45b. Left view of third and fourth male rostral segments.
 - 45c. Enlarged view of left stridulatory comb.
46. *Anisops tanalensis* n. sp.
 - 46a. Inner surface view of male left fore leg.
 - 46b. Left view of third and fourth male rostral segments.
 - 46c. Enlarged view of left stridulatory comb.

PLATE XLIV

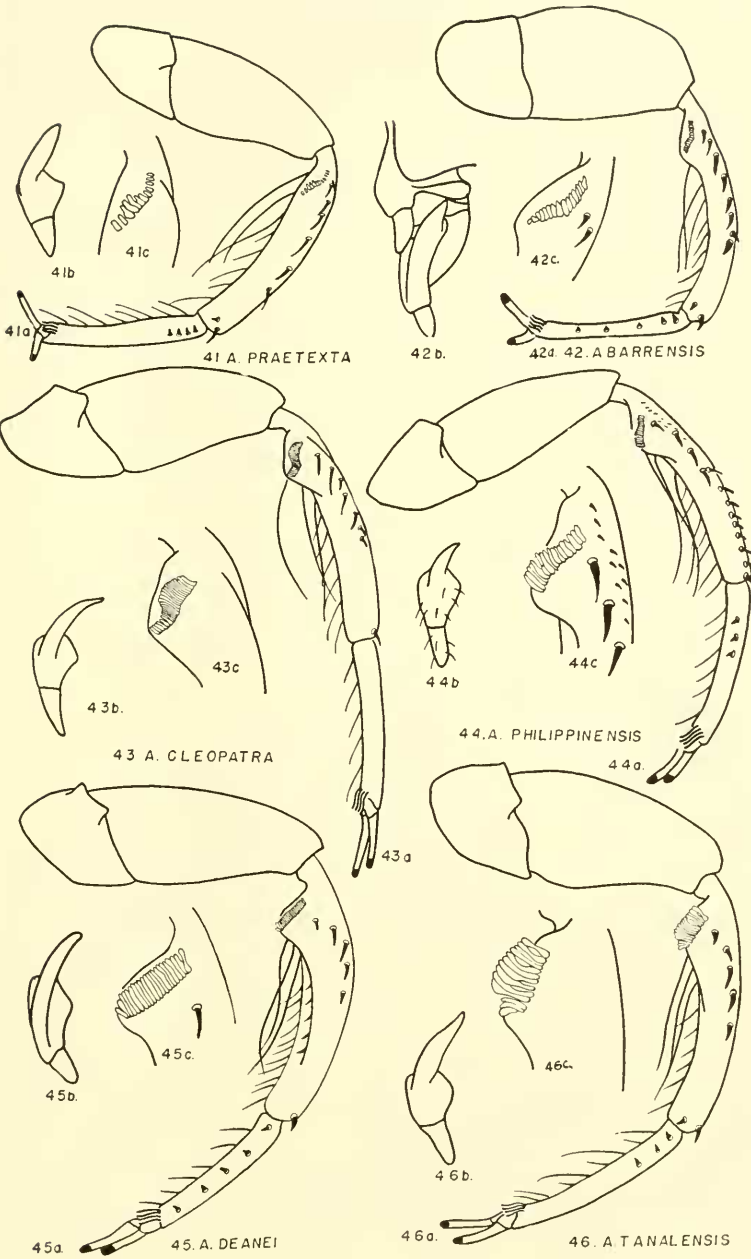
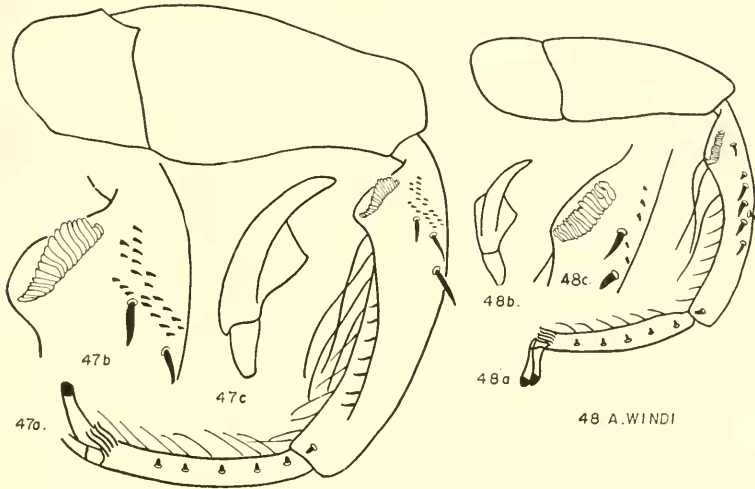


PLATE XLV

FIGURE

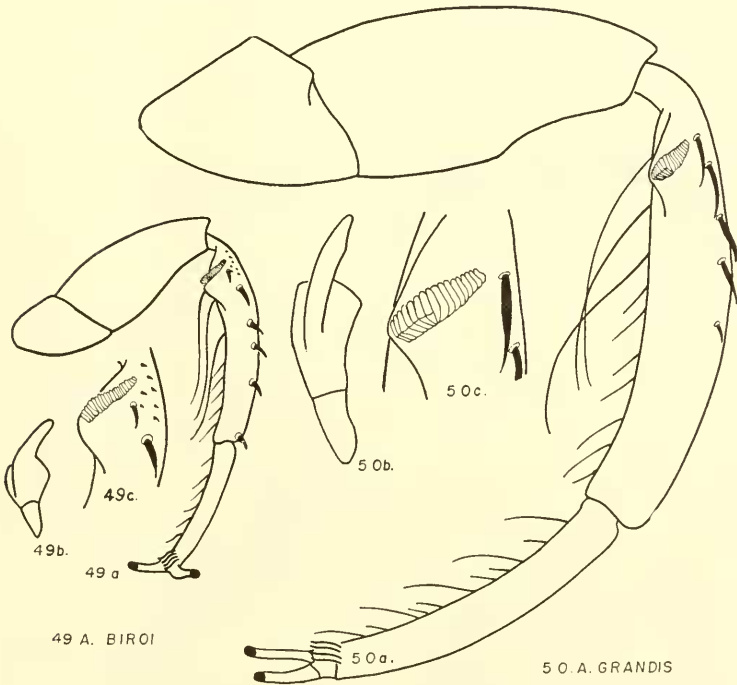
47. *Anisops leucothea* Esaki.
 - 47a. Inner surface view of left male fore leg.
 - 47b. Enlarged view of left stridulatory comb.
 - 47c. Left view of third and fourth male rostral segments.
48. *Anisops vindi* n. sp.
 - 48a. Inner surface view of left male fore leg.
 - 48b. Left view of third and fourth male rostral segments.
 - 48c. Enlarged view of left stridulatory comb.
49. *Anisops biroi* n. sp.
 - 49a. Inner surface of left male fore leg.
 - 49b. Left view of third and fourth male rostral segments.
 - 49c. Enlarged view of left stridulatory comb.
50. *Anisops grandis* Poisson.
 - 50a. Inner surface view of left male fore leg.
 - 50b. Left view of third and fourth male rostral segments.
 - 50c. Enlarged view of left stridulatory comb.

PLATE XLV



47. *A. LEUCOTHEA*

48 *A. WINDI*



49 *A. BIROI*

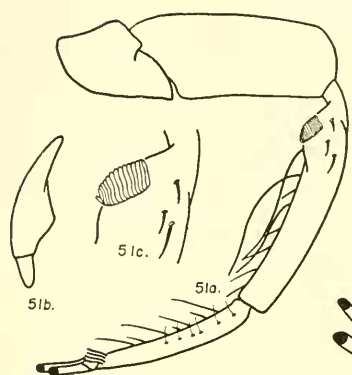
50 *A. GRANDIS*

PLATE XLVI

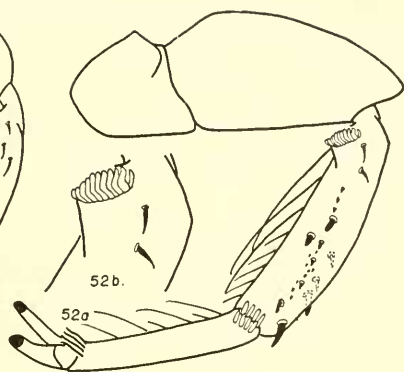
FIGURE

51. *Anisops hungerfordi* Poisson.
 - 51a. Inner surface view of male left fore leg.
 - 51b. Left view of third and fourth male rostral segments.
 - 51c. Enlarged view of left stridulatory comb.
52. *Anisops hancocki* Hutchinson.
 - 52a. Inner surface view of male left fore leg.
 - 52b. Enlarged view of left stridulatory comb.
53. *Anisops doris* Kirkaldy.
 - 53a. Inner surface view of male left fore leg.
 - 53b. Left view of third and fourth male rostral segments.
 - 53c. Enlarged view of left stridulatory comb.
54. *Anisops barbata* n. sp.
 - 54a. Inner surface view of male left fore leg.
 - 54b. Left view of third and fourth male rostral segments.
 - 54c. Enlarged view of left stridulatory comb.

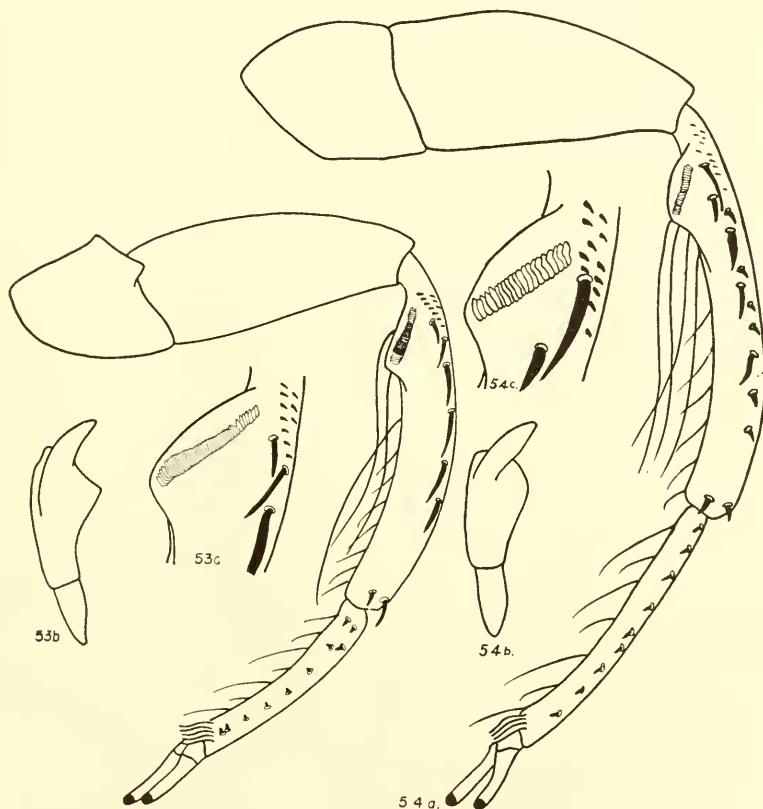
PLATE XLVI



51. A. HUNGERFORDI



52. A. HANCOCKI



53. A. DORIS

54. A. BARBATA

PLATE XLVII

FIGURE

55. *Anisops wakefieldi* White.
55a. Inner surface view of male left fore leg.
55b. Enlarged view of left stridulatory comb.
56. *Anisops nigrolineata* Lundblad.
56a. Inner surface view of male left fore leg.
56b. Enlarged view of left stridulatory comb.
57. *Anisops arcs* Hutchinson.
57a. Inner surface view of male left fore leg.
57b. Left view of third and fourth male rostral segments.
57c. Enlarged view of left stridulatory comb.
58. *Anisops tasmaniaensis* n. sp.
58a. Inner surface view of male left fore leg.
58b. Left view of third and fourth male rostral segments.
58c. Enlarged view of left stridulatory comb.

PLATE XLVII

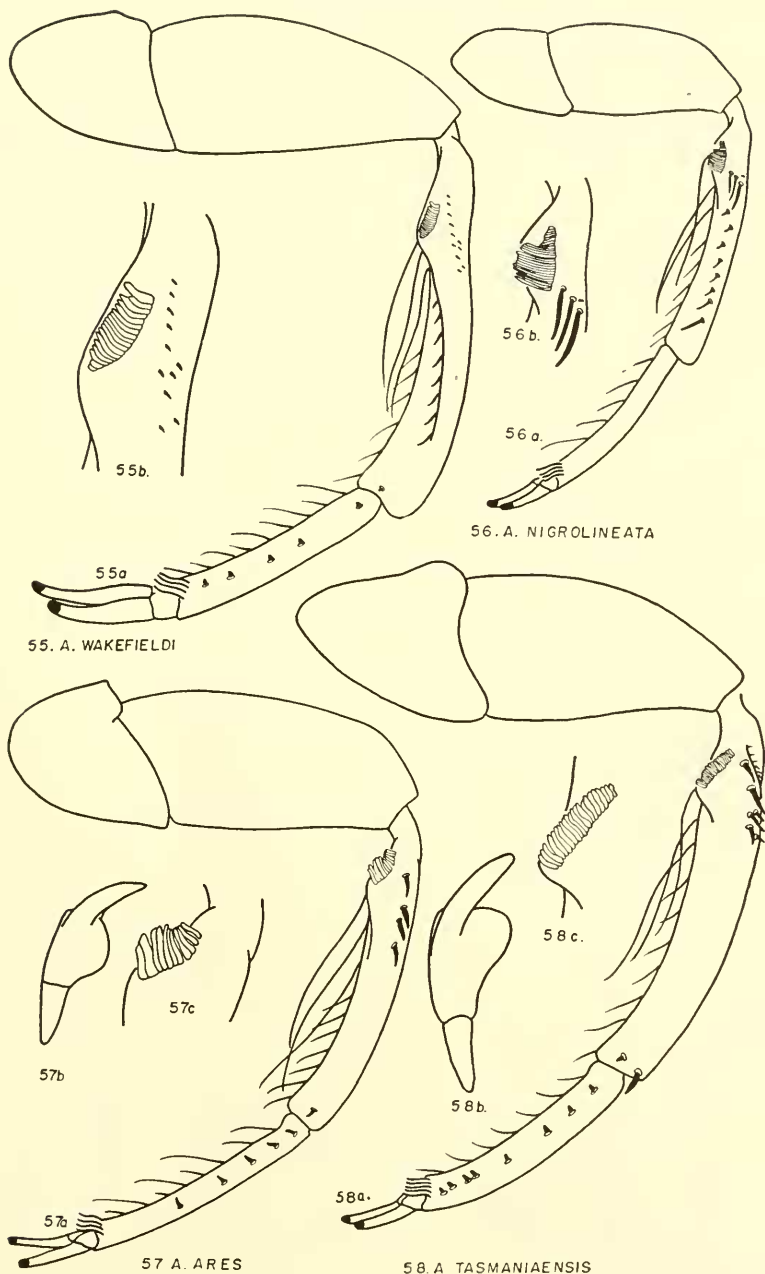


PLATE XLVIII

FIGURE

59. *Anisops paranigrolincata* n. sp.
 - 59a. Inner surface view of male left fore leg.
 - 59b. Left view of third and fourth male rostral segments.
 - 59c. Enlarged view of left stridulatory comb.
60. *Anisops nasuta* Fieber.
 - 60a. Inner surface view of male left fore leg.
 - 60b. Enlarged view of left stridulatory comb.
61. *Anisops assimilis* White.
 - 61a. Inner surface view of male right fore leg minus the tarsus.
 - 61b. Left view of third and fourth male rostral segments.
 - 61c. Enlarged view of right stridulatory comb.
62. *Anisops decipiens* Hutchinson.
 - 62a. Inner surface view of male right fore leg minus the tarsus.
 - 62b. Enlarged view of right stridulatory comb.
 - 62c. Left view of third and fourth male rostral segments.
63. *Anisops thienemanni* Lundblad.
 - 63a. Inner surface view of male left fore leg.
 - 63b. Left view of third and fourth male rostral segments.
 - 63c. Enlarged view of left stridulatory comb.

PLATE XLVIII

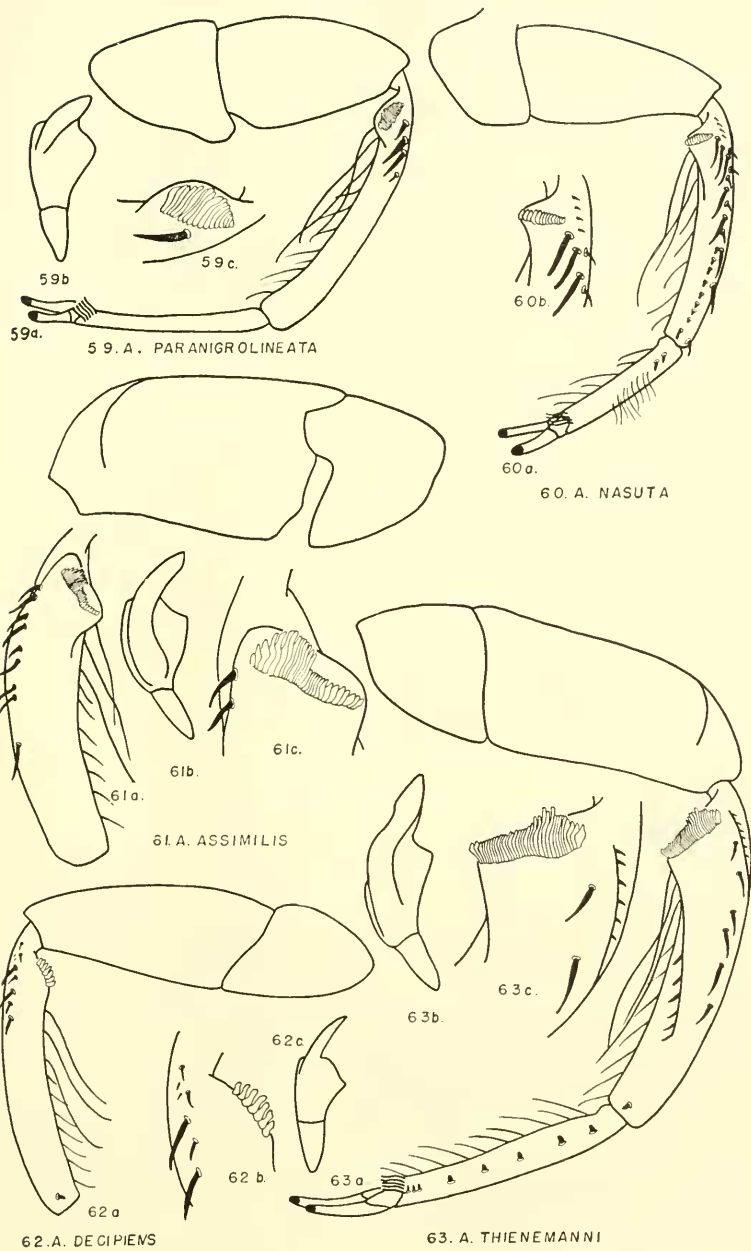
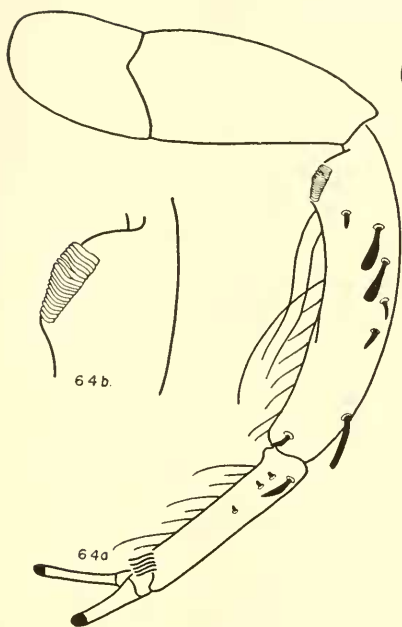


PLATE XLIX

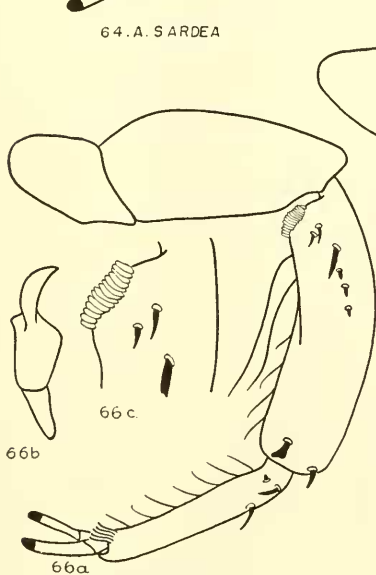
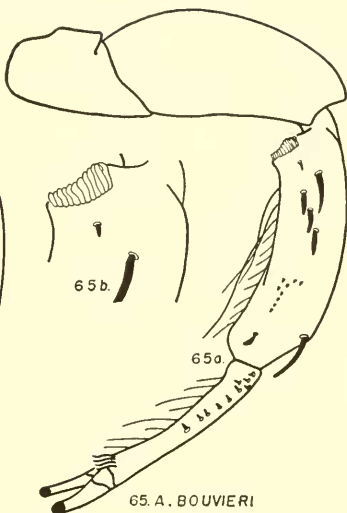
FIGURE

64. *Anisops sardea* Herrich-Shaffer.
 - 64a. Inner surface view of male left fore leg.
 - 64b. Enlarged view of left stridulatory comb.
65. *Anisops bouvieri* Kirkaldy.
 - 65a. Inner surface view of male left fore leg.
 - 65b. Enlarged view of left stridulatory comb.
66. *Anisops extendofrons* n. sp.
 - 66a. Inner surface view of male left fore leg.
 - 66b. Left view of third and fourth male rostral segments.
 - 66c. Enlarged view of left stridulatory comb.
67. *Anisops madagascarensis* Poisson.
 - 67a. Inner surface view of male left fore leg.
 - 67b. Enlarged view of left stridulatory comb.

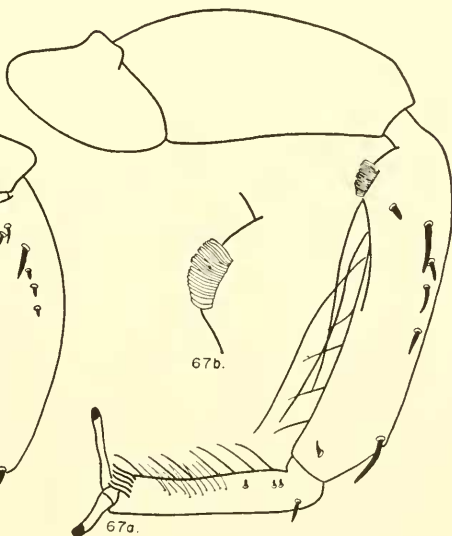
PLATE XLIX



64. A. SARDEA



66. A. EXTENDOFRONS



67. A. MADAGASCARENSIS

PLATE L

FIGURE

68. *Anisops crinata* n. sp.
68a. Inner surface view of male left fore leg.
68b. Left view of third and fourth male rostral segments.
68c. Enlarged view of left stridulatory comb.
69. *Anisops waltairensis* n. sp.
69a. Inner surface view of male left fore leg.
69b. Left view of third and fourth male rostral segments.
69c. Enlarged view of left stridulatory comb.
70. *Anisops leesoniana* Hutchinson.
70a. Inner surface view of male left fore leg.
70b. Left view of third and fourth male rostral segments.
70c. Enlarged view of left stridulatory comb.
71. *Anisops batillifrons* Lundblad.
71a. Inner surface view of male left fore leg.
71b. Enlarged view of left stridulatory comb.
72. *Anisops poweri* Hutchinson—Inner surface view of male left fore leg.
73. *Anisops cavifrons* n. sp.
73a. Inner surface view of male left fore leg.
73b. Left view of third and fourth male rostral segments.
73c. Enlarged view of left stridulatory comb.

PLATE L

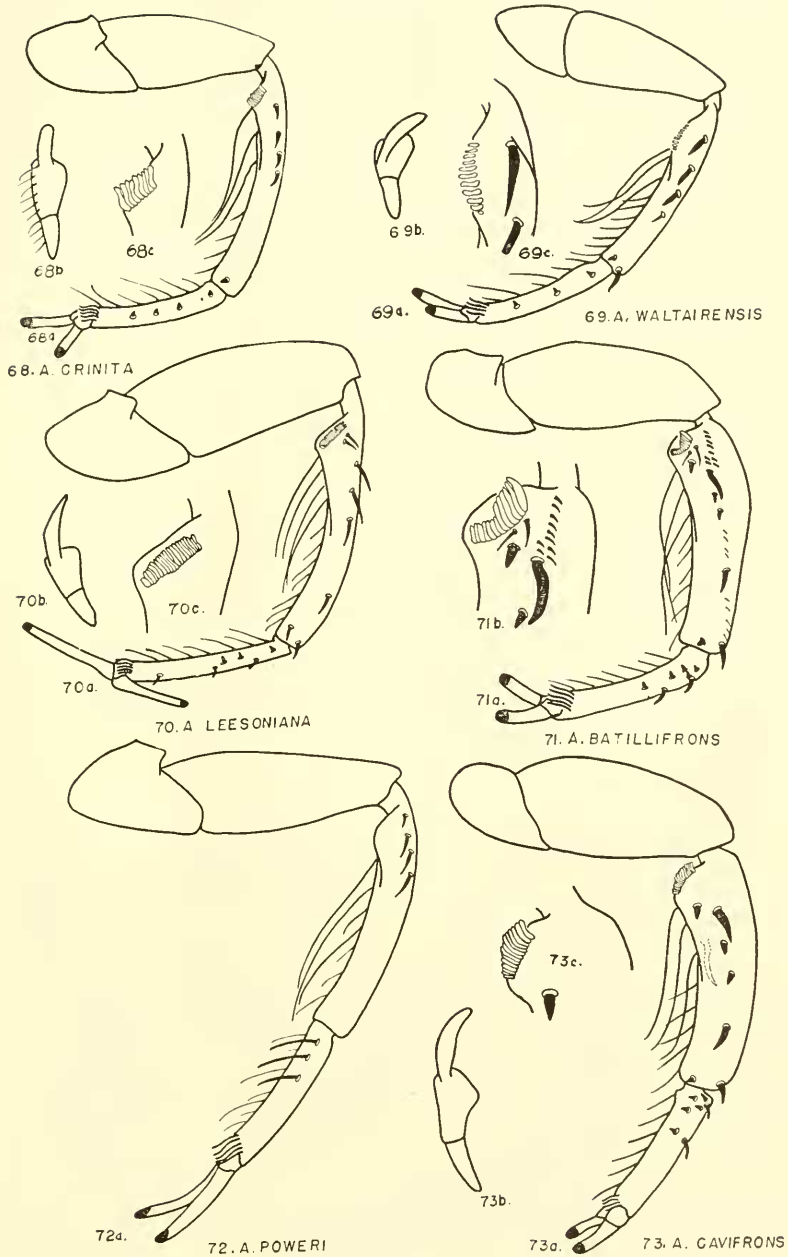
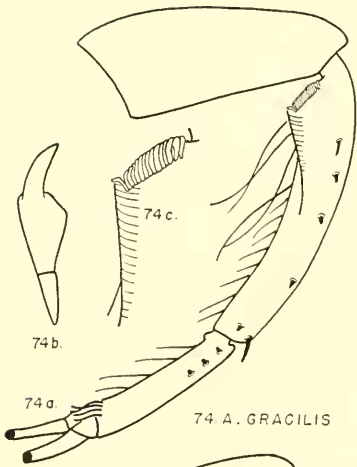


PLATE LI

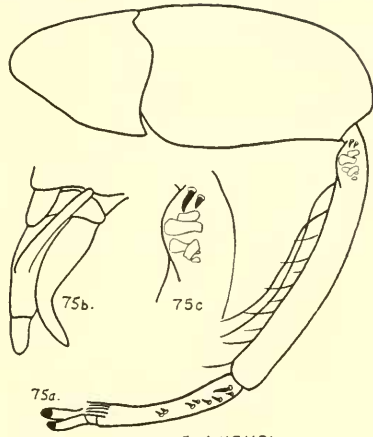
FIGURES

74. *Anisops gracilis* Hutchinson.
 - 74a. Inner surface view of male left fore leg.
 - 74b. Left view of third and fourth male rostral segments.
 - 74c. Enlarged view of left stridulatory comb.
75. *Anisops kempi* n. sp.
 - 75a. Inner surface view of male left fore leg.
 - 75b. Left view of male rostrum.
 - 75c. Enlarged view of left stridulatory comb.
76. *Anisops vitrea* Signoret.
 - 76a. Inner surface view of male left fore leg.
 - 76b. Left view of third and fourth male rostral segments.
 - 76c. Enlarged view of left stridulatory comb.
77. *Anisops exigera* Horvath.
 - 77a. Inner surface view of male left fore leg.
 - 77b. Left view of third and fourth male rostral segments.
 - 77c. Enlarged view of left stridulatory comb.
78. *Anisops breddeni* Kirkaldy.
 - 78a. Inner surface view of male left fore leg.
 - 78b. Enlarged view of left stridulatory comb.
79. *Anisops graciloides* n. sp.
 - 79a. Inner surface view of male left fore leg.
 - 79b. Left view of third and fourth male rostral segments.
 - 79c. Enlarged view of left stridulatory comb.

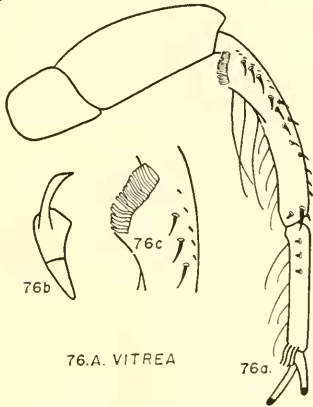
PLATE LI



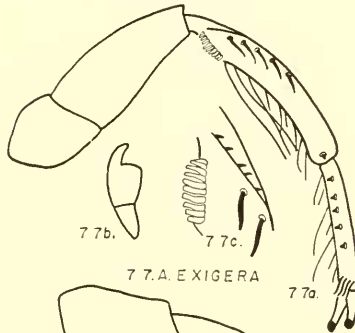
74 A. GRACILIS



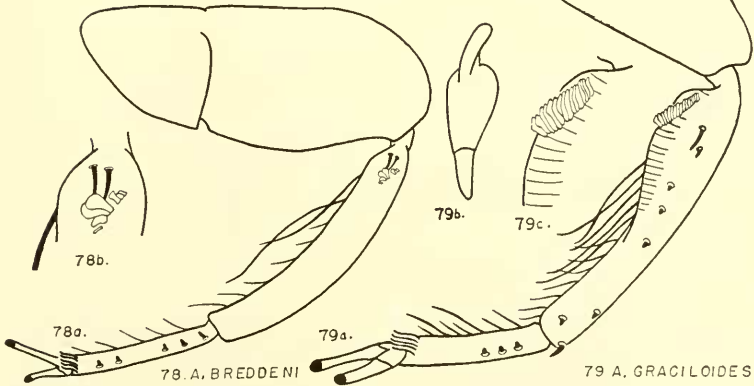
75. A KEMPI



76.A. VITREA



77.A. EXIGERA



78. A. BREDDENI

79 A. GRACILOIDES

PLATE LII

FIGURE

80. *Anisops dcbilis* Gerstaecker.
80a. Inner surface view of male left fore leg.
80b. Left view of third and fourth male rostral segments.
80c. Enlarged view of left stridulatory comb.
81. *Anisops rigoensis* n. sp.
81a. Inner surface view of male left fore leg.
81b. Left view of third and fourth male rostral segments.
81c. Enlarged view of left stridulatory comb.
82. *Anisops hypatia* Hutchinson.
82a. Inner surface view of male left fore leg.
82b. Left view of third and fourth male rostral segments.
82c. Enlarged view of left stridulatory comb.
83. *Anisops majicensis* n. sp.
83a. Inner surface view of male left fore leg.
83b. Left view of third and fourth male rostral segments.
83c. Enlarged view of left stridulatory comb.
84. *Anisops baleis* Hutchinson.
84a. Inner surface view of male left fore leg.
84b. Enlarged view of left stridulatory comb.

PLATE LII

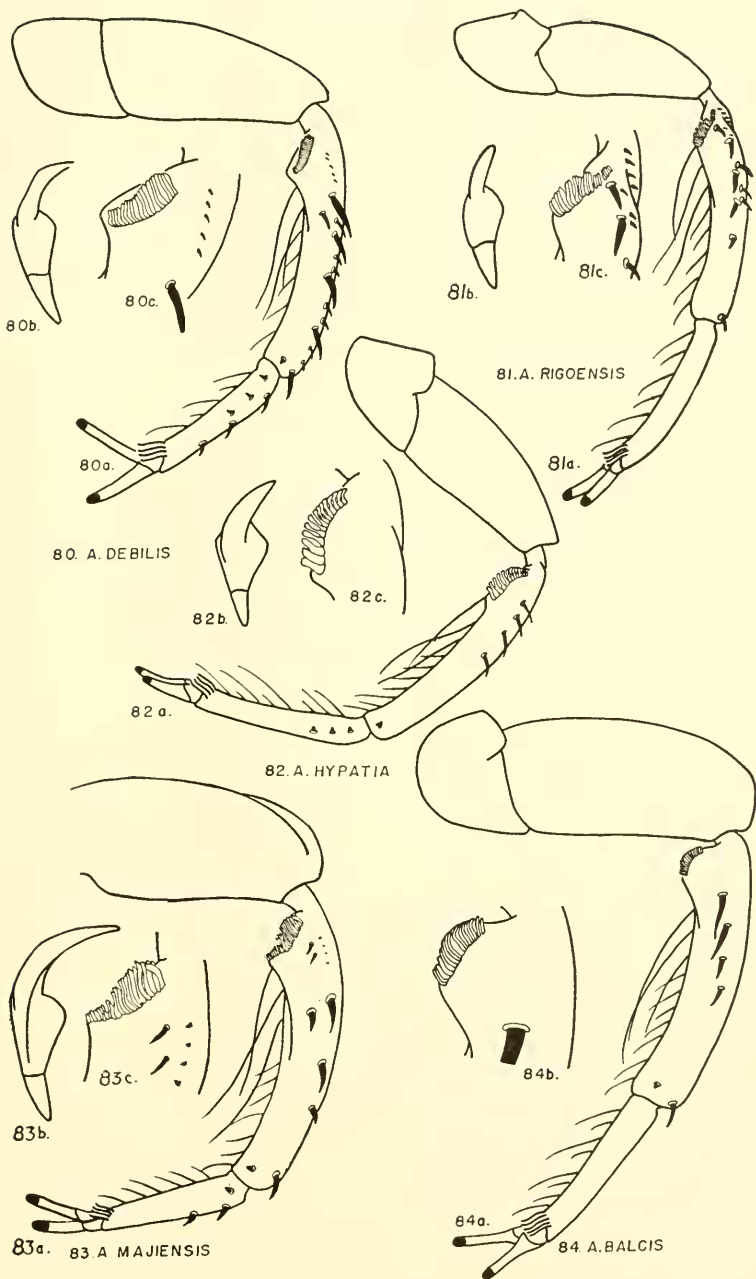
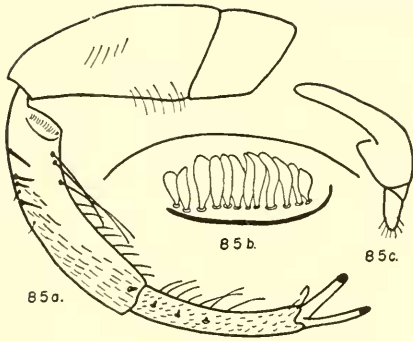


PLATE LIII

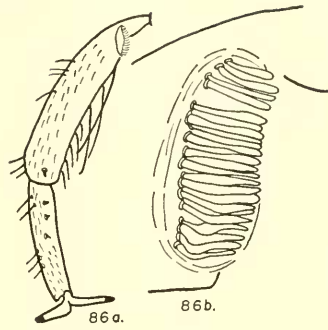
FIGURE

85. *Anisops alluaudi* Poisson.
 - 85a. Inner surface view of male right fore leg.
 - 85b. Enlarged view of right stridulatory comb.
 - 85c. Right view of third and fourth male rostral segments.
86. *Anisops mauricensis* Poisson.
 - 86a. Inner surface view of male right fore tibia and tarsus.
 - 86b. Enlarged view of right stridulatory comb.
87. *Anisops lanceolata* Poisson.
 - 87a. Inner surface view of male right fore leg.
 - 87b. Diagramatic frontal view of third male rostral segment.
 - 87c. Enlarged view of right stridulatory comb.
88. *Anisops letitia* Hutchinson—inner surface view of right fore tibia.
89. *Anisops meulenaerei* Poisson.
 - 89a. Inner surface view of right male fore femur.
 - 89b. Inner surface view of right male fore tibia.
 - 89c. Inner surface view of right male fore tarsus.
 - 89d. Enlarged view of right stridulatory comb.
 - 89e. Right view of third and fourth male rostral segments.

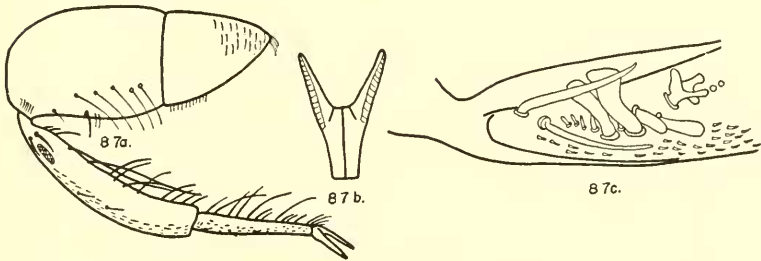
PLATE LIII



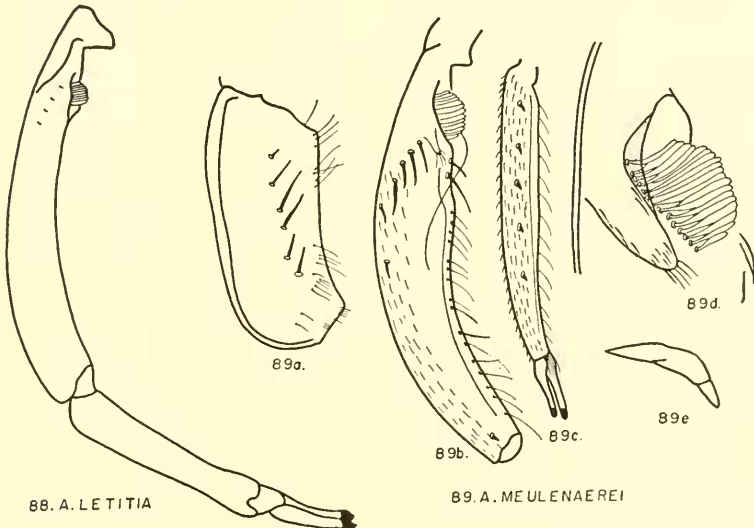
85. A. ALLUAUDI



86. A MAURICENSIS



87. A. LANCEOLATA



88. A. LETITIA

89. A. MEULENAEREI

PLATE LIV

FIGURE

90. *Anisops milloti* Poisson.
 - 90a. Inner surface view of male right fore leg.
 - 90b. Enlarged view of right stridulatory comb.
 - 90c. Right view of male head.
91. *Anisops worthingtoni* Jaczewski.
 - 91a. Inner surface view of male left fore tibia and tarsus.
 - 91b. Left view of male head.
92. *Anisops pugnax* Poisson.
 - 92a. Enlarged view of left stridulatory comb.
 - 92b. Inner surface view of left male fore tibia and tarsus.
93. *Anisops nivea* (Fabricius)—left view of male head and pronotum.
94. *Anisops edepol* Kirkaldy—left view of male head and pronotum.
95. *Anisops poweri* Hutchinson—left view of male head and pronotum.

PLATE LIV

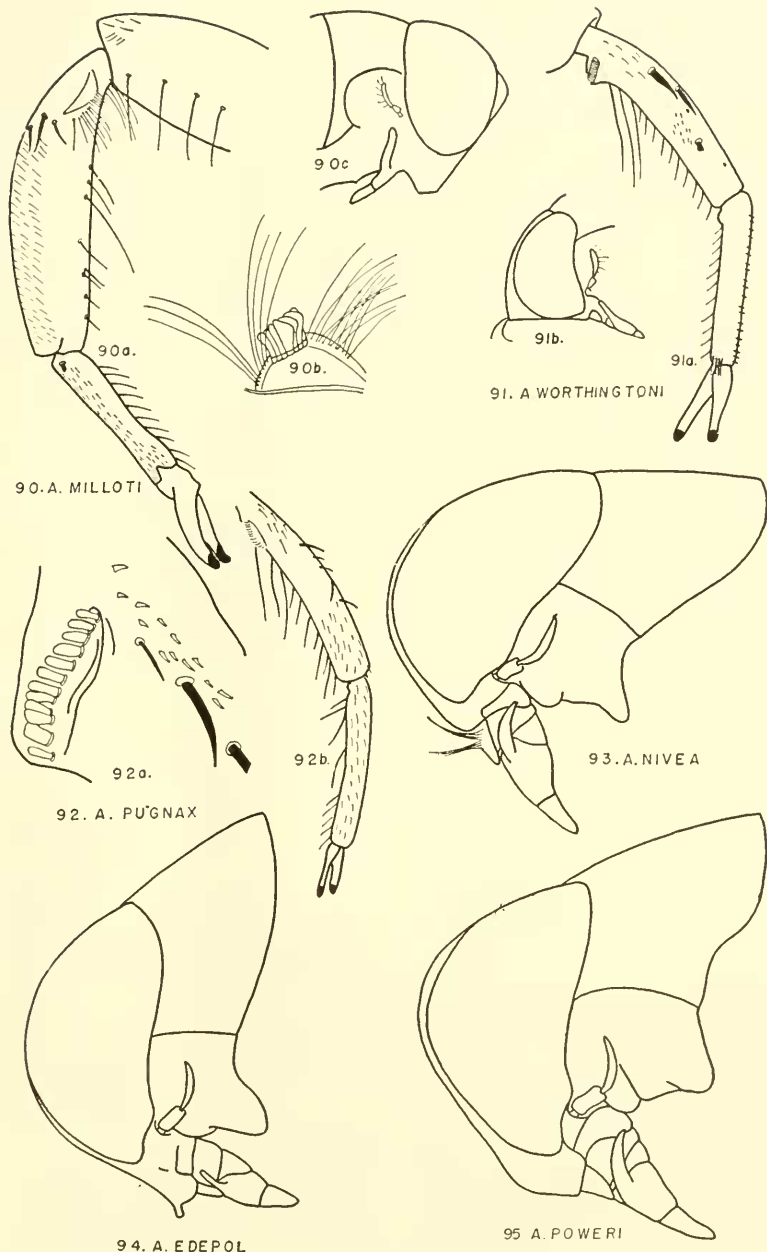


PLATE LV

FIGURE

96. *Anisops hancocki* Hutchinson—left view of male head and pronotum.
97. *Anisops balcis* Hutchinson—left view of male head and pronotum.
98. *Anisops nasuta* Fieber—left view of male head and pronotum.
99. *Anisops breddeni* Kirkaldy—left view of male head and pronotum.
100. *Anisops bouvieri* Kirkaldy—left view of male head and pronotum.

PLATE LV

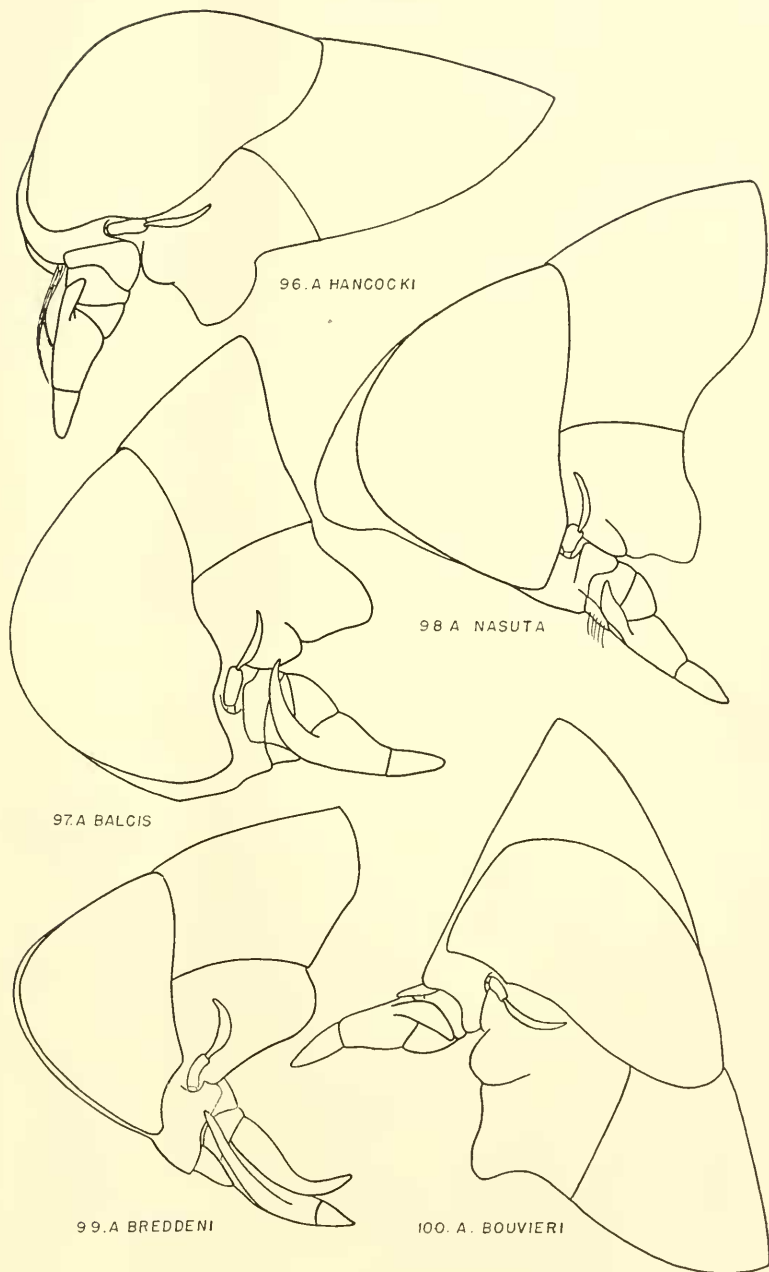


PLATE LVI

FIGURE

101. *Anisops batillifrons* Lundblad—left view of male head and pronotum.
102. *Anisops sardea* Herrich-Shaffer—left view of male head and pronotum.
103. *Anisops sikoroensis* n. sp.—left view of male head and pronotum.

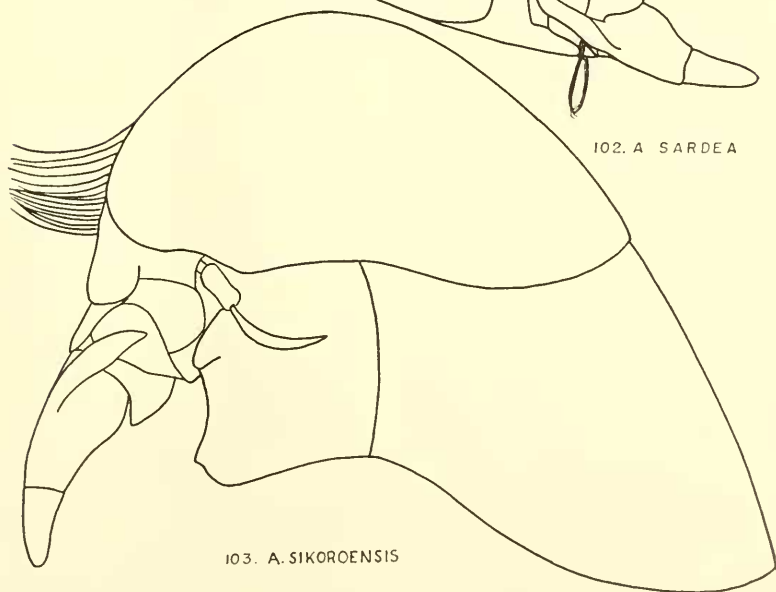
PLATE LVI



101. A. BATILLIFRONS



102. A. SARDEA



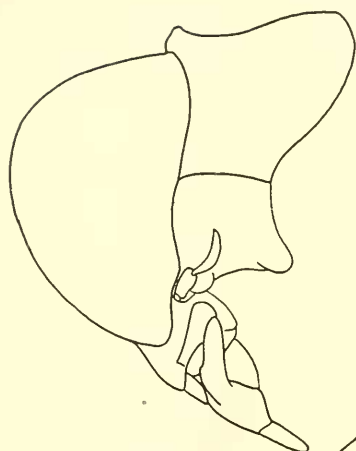
103. A. SIKOROENSIS

PLATE LVII

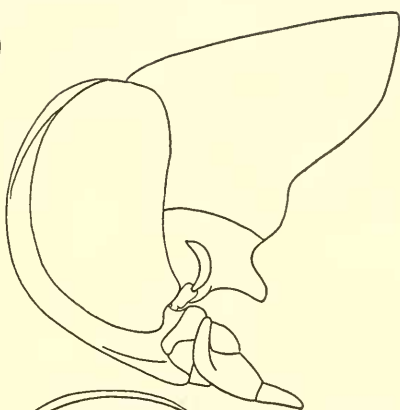
FIGURE

104. *Anisops tuberculata* Poisson—left view of male head and pronotum.
105. *Anisops nigrolineata* Lundblad—left view of male head and pronotum.
106. *Anisops wakefieldi* White—left view of male head and pronotum.
107. *Anisops stali* Kirkaldy—left view of male head and pronotum.

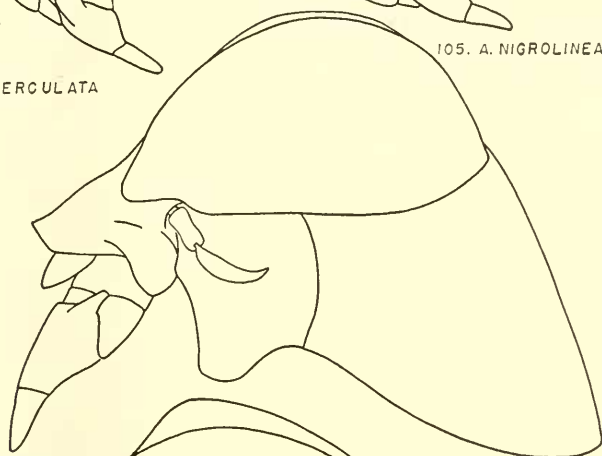
PLATE LVII



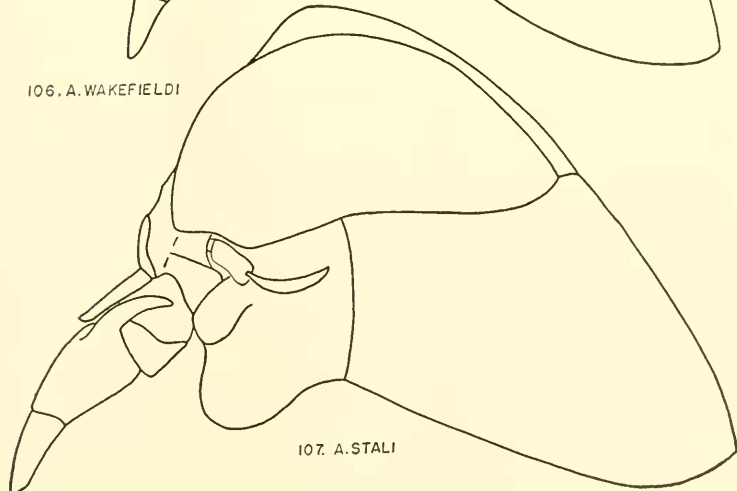
104. *A. TUBERCULATA*



105. *A. NIGROLINEATA*



106. *A. WAKEFIELDI*



107. *A. STALI*